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**THE AGRICULTURAL
SITUATION**

THE AGRICULTURAL SITUATION

ECONOMIC EFFECTS OF FLUCTUATING PRICES

BY

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“During the next twenty years, either consciously or unconsciously, the United States will adopt fairly definite policies as to industry and agriculture. We are approaching that period which comes in the life of every nation when we must determine whether we shall strive for a well-rounded, self-sustaining national life in which there shall be a fair balance between industry and agriculture or whether, as have so many nations in the past, we shall sacrifice our agriculture for the building of cities.”—H. C. WALLACE, SECRETARY OF AGRICULTURE.

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PREFACE

THE far-reaching effects of the agricultural depression on individuals and on the Nation are little understood. The opinions as to the causes and possible remedies are exceedingly diverse. In order that individuals and the Nation may make adjustments to meet the situation the basic data must be available and widely studied. It is the aim of this book to present the fundamental facts in such a way as to aid the farmer, the business man, the legislator, and the student in obtaining a better understanding of the problems which each must meet.

The farmer needs to understand the changed price relationships and the probable future relationships so that he may adjust his farming to meet the changed and changing situation. His past experiences are not a safe guide when conditions are so confused. It is more than ever important that he know the cycles of high and low prices for the different products so that he may not become too discouraged just as improvement is about to occur, or become too optimistic when improvement has occurred.

The business man should understand the agricultural situation, for whatever his business, it will be affected by the violent changes in agriculture and by the changing relationships between agriculture and industry.

The legislator needs to know not only the conditions of the moment but the probable future relationships if he is to be able to choose the constructive remedies from the innumerable proposals that are urged on his attention.

The data used are in a large measure derived from government reports, particularly from reports of the Department of Agriculture. Unless otherwise noted, nearly all the farm price data are from reports of the Department of Agriculture.

ITHACA, N. Y.,
Aug. 20, 1924

G. F. WARREN,
F. A. PEARSON.

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THE AGRICULTURAL SITUATION

CHAPTER I

THE AGRICULTURAL SITUATION

Prices.—(The outstanding cause of the agricultural depression is the low price of farm products compared with taxes on farm land, payments of interest, wages, and prices of things that farmers buy.) For the year 1923, wholesale prices of all commodities, as reported by the Bureau of Labor Statistics, were 57 per cent above the five-year average before the war. The average for the non-agricultural products was 72 per cent above the pre-war level. (This average omits farm products and foods.) Wage rates were 115 per cent above pre-war wages. In contrast with these, hogs were worth less than the five-year pre-war average price. Beef cattle were practically at the pre-war level. Wheat was 12 per cent above the pre-war price. Eggs were 40 per cent and butter 60 per cent above pre-war prices. The average of all the major food products sold by farmers was but 22 per cent above the pre-war average. The short world crop of wheat in 1924 and the unfavorable weather in the corn belt improved the prices of some of the food products, so that prices paid to farmers for all food materials in September, 1924, were 29 per cent above pre-war prices. (An improvement that depends on weather is not a dependable solution for the agricultural depression.)

Purchasing power of farm products.—Taxes, in 1922, were about 126 per cent above the pre-war level, which meant that it would take twice as many bushels of wheat or over twice as many pounds of hogs or beef cattle to pay taxes as was required before the war. If the tax bill were paid with all food products as sold by farmers, it would have required 85 per cent more produce than before the war.

The mortgage debt on farms increased 132 per cent from 1910 to 1920. Payment of interest, therefore, required approximately

twice as much food products as before the war. It is not surprising that large numbers of farmers were unable to meet their taxes and interest payments. Annual reports of the Attorney General of the United States show that in the corn belt, before the war, 5 per cent

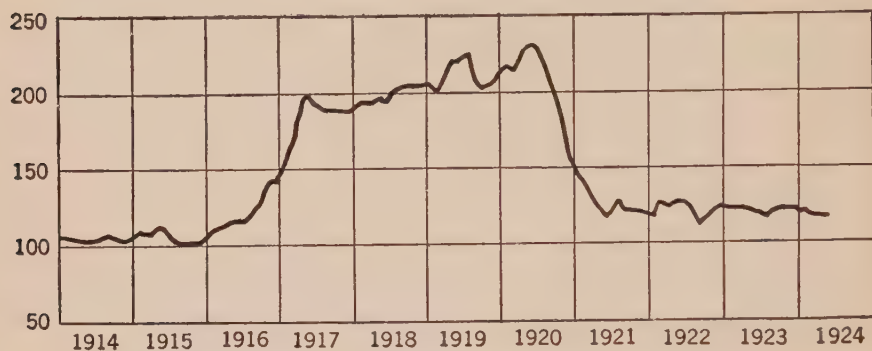


FIG. 1.—Index numbers of prices paid to farmers for food products.

of the bankruptcy cases involved farmers. In 1922, farmers made up 21 per cent of the cases. In the spring-wheat region before the war, 22 per cent were farmers, whereas in 1922, 54 per cent were farmers. For the United States as a whole, the corresponding figures were 6 per cent and 17 per cent.

Since the total of all failures in 1922 was double the number in

Farm Taxes 1914

Farm Taxes 1922

Farm Prices 1914

Farm Prices 1922

FIG. 2.—It required twice as much farm produce to pay the taxes in 1922 as was required before the war.

1913, the number of farm failures increased even more strikingly than the figures indicate. For the United States the number of bankruptcy cases of farmers increased over six times. These simple facts indicate something of the severity of the agricultural depression.

It required one-fourth more food as sold by farmers to buy a given

quantity of all kinds of commodities purchased at wholesale than was required before the war. Even the food as sold by farmers became expensive as it passed through the channels of trade, so that it required 23 per cent more food as sold by farmers to buy a given quantity of food at retail than was required before the war.

To buy farm machinery at average prices in April, 1924, required over 70 per cent more bushels of wheat than before the war. If a variety of food products as sold by farmers were exchanged for farm machinery, over 50 per cent more farm products than before the war were required to exchange for a given quantity of machinery. As a result of this situation, the number of pieces of farm machinery sold in 1921 and in 1922 was about one-third of the number sold in 1920.

At the average freight rates, about a third more food as sold by farmers was required to pay the freight than was necessary before the war.

To hire an hour of labor at union wage rates in 1923 required 76 per cent more food products as sold by farmers than was required before the war. The carpenter who gets \$7 per day would better understand the farm situation if he had gone in debt for a house and were receiving \$3.75 per day, out of which he would have to pay his interest and taxes, and buy groceries and clothing. The barber would understand the farmer's problem if he had gone in debt to purchase his shop and his home, and had to pay for them with 30-cent haircuts and 12-cent shaves.

(The three great problems of the farmer during the period of the agricultural depression are the exchange of farm commodities for other things, and the payment of taxes, and payment of interest and debts.)

(The prices paid to farmers for farm products compared with prices of non-agricultural products are shown in Fig. 26. This shows how much more produce the farmer had to sell to pay for a given quantity of purchases than was required before the war. The great increases in taxes and debt as compared with prices are shown in Figs. 2 and 3. (Since interest and taxes must be paid first, the quantity of farm produce available for exchange for other commodities was greatly decreased.)

Cotton and lumber.—The exceedingly low price for staple foods, together with high wages, left much of the city laborer's income available for the purchase of the more desirable products. Cotton, wool,

lumber, and some of the choicer vegetables and fruits were in such high demand that the prices of these were very high. In 1923, the farm price of cotton was 115 per cent above the pre-war average. For any region that had a good crop, this was a very profitable price. In North Carolina the crop was good, and an acre of cotton would buy 87 per cent more of general commodities at wholesale prices than it would have bought before the war. The yield was also good in Texas. In most of the Southern States, however, the yield per acre was so low as to make the crop unprofitable even at the high price. The product of an acre of cotton in Georgia would exchange for only 71 per cent of the pre-war amount of commodities at wholesale prices.

Conditions in different states.—Owing to the different combina-

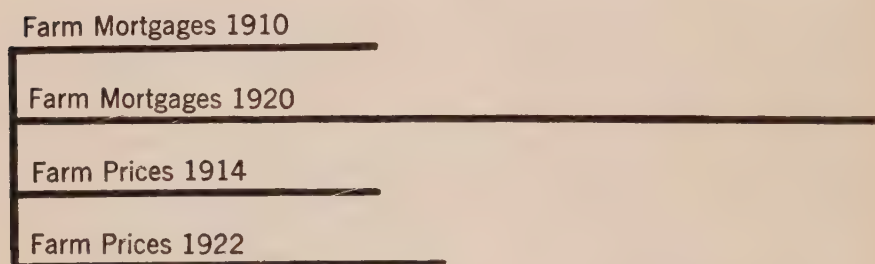


FIG. 3.—In 1922, twice as much farm produce was required to pay interest and debts as was required in 1910.

tion of products and to the varying influences of high freight rates, prices in 1923 as received by farmers in different states were decidedly variable. The general average of products as sold by North Dakota farmers brought only 5 per cent more than the pre-war average. In Iowa, farm products brought 13 per cent above pre-war prices; in Oregon, 19 per cent, New York, 42 per cent, and in Texas, 67 per cent above the five-year pre-war average.

Some effects of the depression.—Reports gathered by the United States Department of Agriculture for the period January, 1920, to March, 1923, for 94,000 farmers in 15 western states, indicated that 4 per cent of the owners lost their farms through foreclosure or bankruptcy, 4.5 per cent turned their farms over to creditors without legal proceedings, or 8.5 per cent lost their farms. In addition, more than 15 per cent were in fact bankrupt, but still held their farms. The percentage of farm owners who lost their farms varied from 6 per cent

in the North Central States to nearly 20 per cent in the Mountain States.¹ The percentage of tenants who lost their property was materially higher.

According to studies made by the United States Department of Agriculture the net movement of population from farms to cities in 1922 was 1,120,000 persons. Of the habitable houses on farms, 4.7 per cent were vacant in 1920; 5.7 per cent in 1921; and 7.3 per cent in 1922.¹

These are but a few of the far-reaching effects of the depression that have already occurred. Many other changes have taken place and many more are yet to come. It is the purpose of this book to discuss the facts concerning the depression, the causes of it, and possible remedies, and to suggest changes in farm management that may help the farmer in so adjusting his practices as to enable him to meet the situation, and be ready to make a profit when the depression is over.

¹ Wallace, H. C., Annual Report of the Secretary of Agriculture. U. S. D. A. (1923).
Idem, The Wheat Situation: a Report to the President (1923).

CHAPTER II

RELATION OF THE FINANCIAL POLICY TO THE AGRICULTURAL SITUATION

Early policy of the federal reserve system.—The Aldrich plan for banking reform in this country provided for an emergency currency. This plan was not accepted, and in framing the federal reserve system Congress provided that the new system should exercise a continuous influence over the money market. Accordingly after the passage of the Federal Reserve Act it became necessary for the federal reserve banks to get into the market at an early date, in order to make their influence felt. Since conditions in the money market changed so frequently, the policies of the federal reserve banks also had to be modified from time to time. The financial history of the federal reserve system may be divided into six periods.

Period 1. Inflation prior to American entry into the war.—December 23, 1913, the Federal Reserve Act was approved by President Wilson. The World War broke out in July, 1914, and in November of that year the federal reserve banks began operation. They were confronted with a gigantic task, because this country had had no experience in central banking. Furthermore, there was no time to accumulate experience before the war. The federal reserve banks were further handicapped by frequent changes in personnel, and by lack of training and experience of many of the men occupying important positions.

The greatest expansion of loans and discounts occurred from the fall of 1914 to the spring of 1917, Table I. During that time they increased 42 per cent. Farm prices increased 57 per cent. The physical volume of production increased 41 per cent.

The major part of the increase in loans and prices occurred in the latter part of 1916 and early in 1917, and was approximately coincident with the huge importations of gold. These huge imports of gold, large stocks of money, and the large increase in loans and

TABLE I
FINANCIAL CHANGES FROM 1914 TO 1917

	1914		1917	
Loans and discounts of state and national banks, millions of dollars.	June,	12,243	June,	17,380
Money in circulation, millions of dollars.	June,	3,402	June,	3,849
Federal reserve system:				
Federal reserve notes in circulation, millions of dollars.	Dec.,	11	Mar.,	358
Gold reserves in federal reserve system, millions of dollars.	Dec.,	241	Mar.,	938
Ratio of total reserves to net deposits and note liabilities.	Dec.,	101	Mar.,	89
Bills discounted, millions of dollars.	Dec.,	10	Mar.,	20
Bills bought, millions of dollars.	Dec.,	0	Mar.,	84
Discount rate, Boston.	Nov.,	6	Mar.,	4
Prices of industrial stocks, 1910-14 = 100.	Dec.,	90	Mar.,	151
Wholesale prices of all commodities, 1910-14 = 100. .	Nov.,	99	Mar.,	165
Prices paid to farmers for food products, 1910-14 = 100.	Nov.,	105	Mar.,	165
Physical volume of production, normal = 100.	Nov.,	87	Mar.,	123

discounts, in combination with the European demand for supplies, explain the great increase in prices.

Period 2. War inflation.—The second important epoch in the development of the federal reserve banks began with our participation in the war, in April, 1917, and ended with the armistice, in 1918. During this period, the policy of the Government was to do everything possible to "win the war." The Government encouraged increased production of essential goods in both industrial and rural centers. The Food Administration, War Finance Corporation, Shipping Board, Fuel Administration, War Industries Board, Railroad Administration, Capital Issues Committee, and New York Money Committee, were set up to increase production and reduce consumption of essentials, centralize government purchases, restrict non-essentials, control prices and stabilize credit. Prior to this time, the physical volume of production had been increasing rapidly; thereafter, the physical volume of production did not greatly increase.

With our entry into the World War, it soon became evident that the expenses of the war could not be paid by taxes alone. The immediate expenses of the Government were met by the use of credit. The power of the federal reserve banks for the creation of

credit was immediately recognized, and no doubt with only a desire for good, the policy of the Federal Reserve Board was dominated by the requirements of the Treasury. The easiest method of creating credit was to follow the line of least resistance and issue government obligations upon which the member banks could borrow from the federal reserve banks at low rates of interest. This policy stimulated the local banks in every hamlet, to permit customers to carry liberty bond subscriptions, and led to a large expansion of loans and discounts by local banks to their customers, rural and urban.

"The increasing pressure for credit funds, which would have developed in the year 1917 even if the United States had not entered

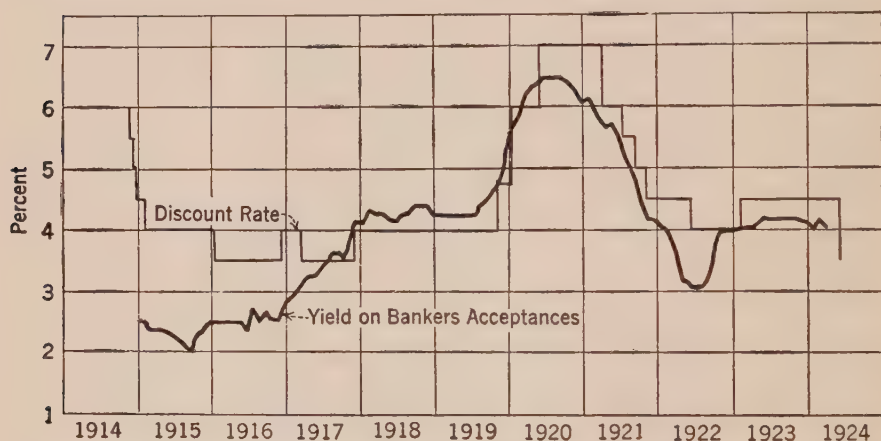


FIG. 4.—Discount rate of the Federal Reserve Bank of Boston and yield on bankers' acceptances.

the war, would undoubtedly have led to the development of an effective discount policy by the federal reserve system—a policy in which main reliance would have been put upon rates, and under which reserve bank rates would have been adjusted to market conditions so as to keep them, in the larger financial centers at least, at or above the ordinary commercial rate; all of this in accordance with well recognized principles of reserve bank practice. With the entry of the United States into the war, the outlook was changed, and the federal reserve system was confronted with large and difficult problems of credit growing out of the loan policy and loan operations of the Treasury. From that time forth to the beginning of the year 1920, the discount policy of the federal reserve system was shaped

not in accordance with money market conditions—not with the idea of using reserve bank rates as an instrument of effective control of the money market—but with the primary purpose of assisting the Treasury in the flotation of its great bond issues and its short-term certificate issues. In brief, the discount policy of the federal reserve system was treated as an element of the Treasury's loan policy, the federal reserve system virtually ceasing to exercise, for the time being, its normal function of regulating credit.”¹

TABLE II
FINANCIAL CHANGES FROM 1917 TO 1918

	1917		1918	
Loans and discounts of state and national banks, millions of dollars.	June,	17,380	June,	19,433
Money in circulation, millions of dollars.	June,	3,849	June,	4,336
Federal reserve system:				
Federal reserve notes in circulation, millions of dollars.	Mar.,	358	Aug.,	2,093
Gold reserves in federal reserve system, millions of dollars.	Mar.,	938	Aug.,	2,014
Ratio of total reserves to net deposits and note liabilities.	Mar.,	89	Aug.,	56
Bills discounted, millions of dollars.	Mar.,	20	Aug.,	1,428
Bills bought, millions of dollars.	Mar.,	84	Aug.,	233
Discount rate, Boston.	Mar.,	4	Aug.,	4.75
Prices of industrial stocks, 1910-14 = 100.	Mar.,	151	Aug.,	131
Wholesale prices of all commodities, 1910-14 = 100. .	Mar.,	165	Aug.,	204
Prices paid to farmers for food products, 1910-14 = 100.	Mar.,	165	Aug.,	223
Physical volume of production, normal = 100.	Mar.,	123	Aug.,	120

During the early development of the federal reserve system, the tremendous increases in loans and discounts and federal reserve notes were not an accurate measure of the general expansion that took place. During this period, the changes in federal reserve bank statistics reflected growth in that system rather than changes in general conditions. The increase in the stocks of money from March, 1917, to August, 1918, was 34 per cent. During the same time the general price level increased 24 per cent and farm prices, 30 per cent.

¹ Miller, A. C., Federal Reserve Policy. Am. Econ. Rev., Vol. XI, No. 2, p. 184, June, 1921.

The federal reserve system should not be blamed for the financial policy of the Treasury during the war. Some inflation was probably inevitable and was not an unmitigated evil. It stimulated producers, made large wage increases in war industries, and helped to shift labor to these essential industries. The policy of holding discount rates down, which resulted in inflation, together with the policies of holding prices down to prevent the results of inflation, left a very bad economic and political situation. The policy enabled the Government to sell bonds at a low rate of interest, but the resulting inflation raised prices so that more bonds were required to finance the Government purchases. A less inflationary policy would have had much less serious consequences, and probably would have made the financing of the war no more difficult.

Period 3. Temporary price recession.—The period from August, 1918, to March, 1919, was a period of price decline, hesitancy, and contraction. The stocks of money increased very little, and loans and discounts of member banks decreased. The index of both the general price level and farm products fell. It was a period of uncertainty. The general expectation was that prices would decline. It was also expected that the return of four million men from the army would cause unemployment. Up to this time, farms had not sold in very unusual numbers, nor at particularly high prices. Pay of teachers and other basic tax expenses had not mounted. Had moderate deflation occurred at this time, the agricultural depression probably would have been no more severe than that which followed the Civil War, or the War of 1812.

Period 4. Post-war inflation.—In the early part of 1919, the Government was considering the flotation of the Victory Loan. "The Treasury Department was unwilling to undertake the flotation of the Victory Loan at a rate of interest comparable with commercial rates on account of the possible effect which that action would have upon existing issues of private securities and its possible effect in requiring the refunding of the issues of Government bonds already floated.

"The discount policy of the Federal reserve banks was again subordinated to the Treasury policy in securing its credit requirements, although at this time the tendency toward expansion, speculation, and extravagance was beginning to be apparent.

"This was clearly the time for a policy of advancing the discount rates of the Federal reserve banks with a view of curtailing the

TABLE III
FINANCIAL CHANGES FROM 1918 TO 1919

	1918		1919	
Loans and discounts of state and national banks, millions of dollars.....	June,	19,433	June,	21,950
Money in circulation, millions of dollars.....	June,	4,336	June,	4,795
Federal reserve system:				
Federal reserve notes in circulation, millions of dollars.....	Aug.,	2,093	Mar.,	2,522
Gold reserves in federal reserve system, millions of dollars.....	Aug.,	2,014	Mar.,	2,142
Ratio of total reserves to net deposits and note liabilities.....	Aug.,	56	Mar.,	52
Bills discounted, millions of dollars.....	Aug.,	1,428	Mar.,	1,886
Bills bought, millions of dollars.....	Aug.,	233	Mar.,	248
Discount rate, Boston.....	Aug.,	4.75	Mar.,	4.75
Prices of industrial stocks, 1910-14 = 100.....	Aug.,	131	Mar.,	140
Wholesale prices of all commodities, 1910-14 = 100..	Aug.,	204	Mar.,	200
Prices paid to farmers for food products, 1910-14 = 100.....	Aug.,	202	Mar.,	198
Physical volume of production, normal = 100.....	Aug.,	123	Mar.,	84
Unfilled orders of U. S. Steel Corporation, millions of tons.....	Aug.,	9	Mar.,	5

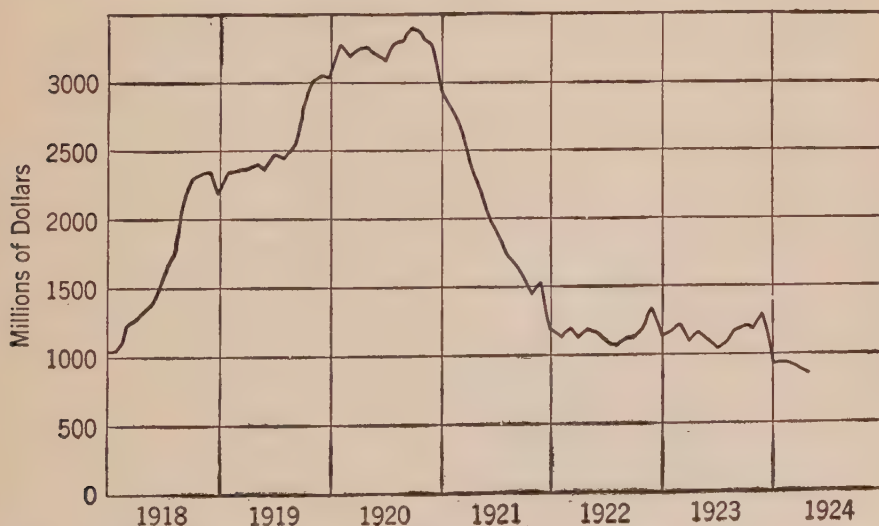


FIG. 5.—Total earning assets of the federal reserve system. The credits extended and the securities held by the federal reserve system reached a peak in 1920, and fell to about one-third of that amount in 1922 to 1924.

expansion, speculation, and extravagance which was then beginning.

"It is the opinion of the commission that a policy of restriction of loans and discounts by advances in the discount rates of the Federal reserve banks could and should have been adopted in the early part of 1919, notwithstanding the difficulties which the Treasury Department anticipated in floating the Victory Loan if such a policy were adopted.

"It is also the opinion of the commission that had this policy been adopted in the early part of 1919 much of the expansion, speculation, and extravagance which characterized the post-war period could have been avoided.

"The commission also believes that had such a policy been adopted in 1919 the difficulties, hardships, and losses which occurred in 1920-21 as a result of the process of deflation and liquidation would have been diminished.

"No action in the direction of restriction of expansion, inflation, and speculation by increases in discount rates was taken by the Federal reserve banks or the Federal Reserve Board until December, 1919, when slight advances were made in discount rates, followed in January by more radical advances and by further increases during the remainder of 1920." ²

During our participation in the World War, Congress authorized the Secretary of the Treasury to determine the rates at which the various issues of bonds and certificates should be sold. The relation of the United States Treasury to the federal reserve system was clearly stated by the Governor of the Federal Reserve Board, at the hearings of the Senate and House Committees on Agriculture, December 3, 1920.

"The Federal Reserve Board adopted a policy in order to assist in the war financing which was economically unsound. I say this frankly. Congress authorized certain loans. It authorized the Secretary of the Treasury to determine the rates at which the loans should be issued. The Secretary of the Treasury asked the advice of experts and then fixed the rates of interest to be borne by the several issues of bonds, notes, and certificates. During the time we were actually at war, something like \$18,000,000,000 of bonds were sold to the people, an amount certainly in excess of the normal

² ————— Report of the Joint Commission of Agricultural Inquiry, House of Rep., 67th Cong., 1st Session, Report 408, Part II, p. 12, 1922.

ment power of the American people in such a short time, and the only way in which those loans could be financed was through the instrumentality of the banks. The only way the banks could undertake to do it was to get some assistance from the Federal Reserve Banks and at a low rate. The low rate of interest borne by these bonds was fixed with a view of holding down the expenses of the Government as far as possible. Anyway, that is something the Federal Reserve Board has no responsibility for. In order to make possible the floating of these bonds we fixed a rate less than their coupon rate. Some member banks announced that for a period of six months there would be a rate of $4\frac{1}{4}$ per cent on notes secured by Government obligations. The result was there was no loss to subscribing banks pending the distribution of the bonds to the public. There were successive bond issues. The principal reason why discount rates were not increased earlier than they were in 1919 was on account of Treasury financing.”³

TABLE IV
FINANCIAL CHANGES FROM 1919 TO 1920

	1919		1920	
Loans and discounts of state and national banks, millions of dollars.....	June,	21,950	June,	27,368
Money in circulation, millions of dollars.....	June,	4,795	June,	5,332
Federal reserve system:				
Federal reserve notes in circulation, millions of dollars.....	Mar.,	2,522	June,	3,117
Gold reserves in federal reserve system, millions of dollars.....	Mar.,	2,142	June,	1,969
Ratio of total reserves to net deposits and note liabilities.....	Mar.,	52	June,	44
Bills discounted, millions of dollars.....	Mar.,	1,886	June,	2,432
Bills bought, millions of dollars.....	Mar.,	248	June,	399
Discount rate, Boston.....	Mar.,	4.75	June,	7
Prices of industrial stocks, 1910-14=100.....	Mar.,	140	June,	146
Wholesale prices of all commodities, 1910-14=100..	Mar.,	200	June,	248
Prices paid to farmers for food products, 1910-14=100.....	Mar.,	198	June,	232
Physical volume of production, normal=100.....	Mar.,	84	June,	105
Unfilled orders of U. S. Steel Corporation, millions of tons.....	Mar.,	5	June,	11

³ Miller, A. C., Federal Reserve Policy. Am. Econ. Rev., Vol. XI, No. 2, p. 185, June, 1921.

The low discount policy made cheap money. This stimulated production, speculation, and extravagance, increased borrowing, and caused a large rise in prices. From March, 1919, to June, 1920, loans and discounts of state and national banks increased 25 per cent. Federal reserve notes in circulation increased 24 per cent. Unfilled orders of the United States Steel Corporation increased 120 per cent. General prices increased 24 per cent; and farm prices, 17 per cent.

This period of secondary inflation was largely responsible for the rise in land values, which laid the foundation for the severity of the agricultural panic. Prices of plow lands in the United States rose relatively little before that time. According to reports from the United States Department of Agriculture, the increase from 1916 to 1918 was from \$58 to \$68 per acre, but from 1918 to 1920 land rose from \$68 to \$90 per acre.

Period 5. Deflation.—The unprecedented deflation that occurred in 1920 could not have taken place if it had not been preceded by wild inflation.

Following the close of the war, industry and agriculture had begun to adjust themselves to lower price levels, when, out of a clear sky, inflation took place, prices rose, speculation was rampant, and extravagance became unbridled. The frenzy became so intense that wholesale merchants experienced a sudden increase of unusual proportion in their orders. Orders were duplicated. Some merchants gave purchasers only a certain percentage of their orders. Consequently, buyers often placed several orders for the same product with different dealers. This led to a runaway market, such as had never before been experienced by the present generation.

No action was taken to stop the mania for expansion until December, 1919, when slight advances in the discount rate were made. The frenzy continued into 1920, and the federal reserve banks were in such a precarious position that they felt it necessary to make radical advances in the discount rates in order to save themselves. In some of the reserve banks, if there had been no inter-bank borrowing, the reserves would have been down to 9 per cent and in one case, it is said, the reserves of one bank would have been entirely exhausted. In the New York Federal Reserve Bank the combined reserve ratios fell almost to the legal limit.

Agitation throughout the Nation against high prices became so violent that, on May 17, 1920, the United States Senate adopted a

TABLE V
FINANCIAL CHANGES FROM 1920 TO 1921

	1920		1921	
Loans and discounts of state and national banks, millions of dollars.....	June,	27,368	June,	24,762
Money in circulation, millions of dollars.....	June,	5,332	June,	4,843
Federal reserve system:				
Federal reserve notes in circulation, millions of dollars.....	June,	3,117	June,	2,648
Gold reserves in federal reserve system, millions of dollars.....	June,	1,969	June,	2,468
Ratio of total reserves to net deposits and note liabilities.....	June,	44	June,	61
Bills discounted, millions of dollars.....	June,	2,432	June,	1,751
Bills bought, millions of dollars.....	June,	399	June,	40
Discount rate, Boston.....	June,	7	June,	6
Prices of industrial stocks, 1910-14=100.....	June,	146	June,	111
Wholesale prices of all commodities, 1910-14=100..	June,	248	June,	145
Prices paid to farmers for food products, 1910-14=100.....	June,	232	June,	118
Physical volume of production, normal=100.....	June,	105	June,	76
Unfilled orders of U. S. Steel Corporation, millions of tons.....	June,	11	June,	5
Pig iron production, millions of tons.....	June,	3	Aug.,	1

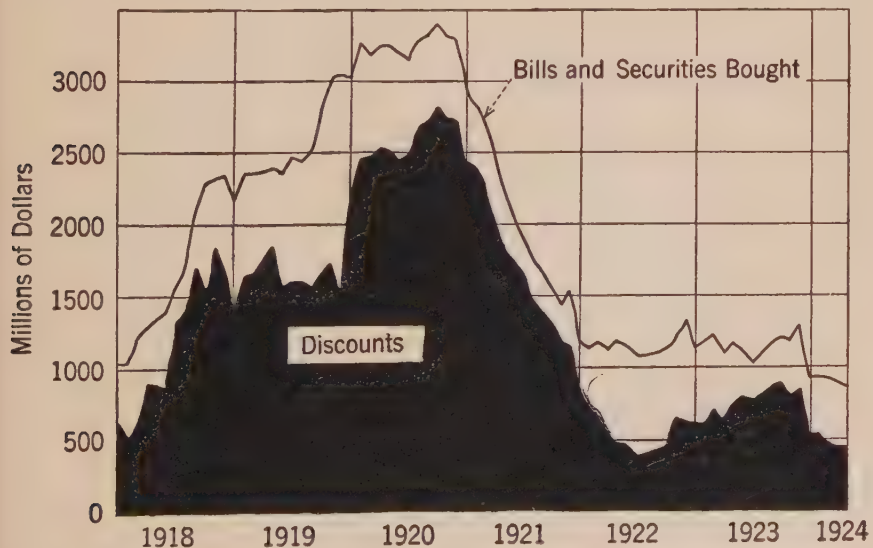


FIG. 6.—Discount, and bills and securities bought by the federal reserve banks. By the purchase of bills and securities in the open market, the total earning assets may be regulated and thereby influence credit conditions.

resolution requiring the Federal Reserve Board to "advise the Senate what steps it proposed to take or recommend to the member banks of the federal reserve system to meet the existing inflation of the currency and credits and the consequent high prices."⁴ By this time the banks had become alarmed and raised the discount rates with great rapidity. The larger federal reserve banks raised their rates to 7 per cent in June, 1920. This was accompanied by a perpendicular decline in prices, production, and speculation. The debacle of prices which started in 1920 brought on the worst agricultural panic ever experienced in America.

The exhaustion of European credit in this country; the large stocks of goods in manufacturers', wholesalers' and retail dealers' hands; fright; and cancellation of orders; all this, combined with the pressure by the federal reserve system and credit stringency, precipitated the panic.

Period 6. Stabilized deflation.—In spite of such an unstable background, the price level for the three years 1921–23 was maintained at a fairly stable level, and so continued into 1924. During this period, wholesale prices were stabilized at about 50 per cent above pre-war. The variations were more than was usual in the period before the war, but were remarkably small in view of the large importations of gold.

Results of stabilized deflation.—Wages reached a level more than double their pre-war average before deflation took place. As is always the case when deflation occurs, wages lag. Even so severe a period of unemployment as occurred in 1921, while reducing the cash received by workers, diminished the wage rates but little. So large a proportion of the workers are employed by railroads or in public service, that the lag is even greater than formerly. Wage rates have been stabilized at about double the pre-war average.

With wholesale prices stabilized at 50 per cent above pre-war, and handling charges stabilized on a higher basis, farm prices of food products were automatically stabilized at a much lower level, for reasons explained in Chapter IX.

What should the price level be?—Every class in our population desires a stable price level. Those whose incomes are derived from bonds or fixed salaries desire stability at a low price level. Those whose primary problem is the payment of taxes and interest desire

⁴ ——— Credit. Report of Joint Commission of Agricultural Inquiry, House of Rep., 67th Cong., 1st Session, Report 408, Part. II, p. 86, 1922.

stability at a high price level. No one denies the advantage of a stable price level; but after a period of violent price fluctuations, it is difficult to find two classes that agree on the price level at which stabilization should take place.

TABLE VI
FINANCIAL CHANGES FROM 1921 TO 1924

	1921		1924	
Loans and discounts of state and national banks, millions of dollars.....	June,	24,762	.....
Money in circulation, millions of dollars.....	June,	4,843	June,	4,755
Federal reserve system:				
Federal reserve notes in circulation, millions of dollars.....	June,	2,648	June,	1,861
Gold reserves in federal reserve system, millions of dollars.....	June,	2,468	June,	3,128
Ratio of total reserves to net deposits and note liabilities.....	June,	61	June,	84
Bills discounted, millions of dollars.....	June,	1,751	June,	334
Bills bought, millions of dollars.....	June,	40	June,	37
Discount rate, Boston.....	June,	6	June,	3.5
Prices of industrial stocks, 1910-14 = 100.....	June,	111	June,	148
Wholesale prices of all commodities, 1910-14 = 100..	June,	145	May,	150
Prices paid to farmers for food products, 1910-14 = 100.....	June,	118	June,	119
Physical volume of production, normal = 100.....	June,	76	April,	96

Debts incurred when prices are at 150 and paid when prices are on the same level, result in no injustice to either debtor or creditor. Most of the vast array of public and private debts now unpaid were incurred when prices were more than 50 per cent above pre-war. To stabilize at 150 is an injustice to taxpayers and gives the bond holder a purchasing power to which he is not entitled. Most of the farm mortgages now running were incurred at a price level much above pre-war. Some such mortgages were incurred before the war, so that a price level of 150 favors the borrower.

(Certainly no one can decide without thorough investigation what price level will cause the least algebraic sum of human injustice. If the price level is too high, it results in all the objectionable features of inflation. If stabilized at too low a level, it is unjust to a great mass of persons who pay taxes and debts. Too low a price level will result in continued violent shifts from one industry to

another, serious unemployment at times, and will increase the difficulties that European countries have in settling their obligations to us, and in exchanging their products for the necessities they must get from us.)

Through the agency of the discount rate and sale and purchase of securities, the reserve banks can influence business conditions and the price level. Some persons believe that this influence should be used to reduce the cost of living, and bring prices to a pre-war basis. Others believe that the influence should be used to maintain the present price level. Still others believe that the attention should be given to the price history of recent years, and relationships between different industries, between debtors and creditors, between taxpayers and bond holders, and that wages and other economic factors should be considered. Still others believe that no consideration should be given to the price level. This point of view is academic because the policies will in any event influence prices.

A study of the price situation needed. (It is the opinion of the writers that the best method of procedure is to have a commission appointed by Congress to make a scientific study of the relationship of different classes and determine the price level that will result in the least total injustice, and to study the feasibility of various methods of obtaining a reasonable degree of price stability.)

CHAPTER III

OTHER CAUSES OF THE AGRICULTURAL DEPRESSION

Expansion of production.—For many years, ending with about 1896, the general price level was declining. Farm prices declined even more rapidly. They were lowered by the same causes that lowered the general price level, and in addition were crowded down by the rapid expansion of agricultural production. Beginning with 1897, prices began to rise and farm prices rose more rapidly than the general price level. From 1910 to 1920, the rising prices caused rapid expansion of agriculture in the United States and Canada. In this country, part of the expansion was by bringing in new land and part was by tile drainage, the use of lime, fertilizer, and other intensive methods so that the yields per acre rose rapidly. The war gave a further impetus to such development. North America, Australia, and the Argentine expanded their production to make up for the loss of Russian and Roumanian exports, for the decreased production in western Europe, and for the losses at sea; and they had enough left over to provide for the great government and private hoardings of the war period.

The United States and Canada are one agricultural unit. The production of wheat in this area has increased much more rapidly than has the population. The production per capita in ten years increased 1.2 bushels over that of the previous ten years.

TABLE VII
EXPANSION OF WHEAT PRODUCTION

	1902 to 1911	1912 to 1921
Ten-year average production of wheat in the United States and Canada, in millions of bushels.....	797	1067
Average production per capita in bushels.....	8.6	9.8

Government hoarding.—The United States Government loaned large sums of money to European countries, and continued to make

such loans after the armistice. Much of this money was used to buy farm products far in advance of current needs. Additional quantities were purchased with credit furnished by private agencies. Apparently, all the governments were frightened concerning the food supply, and each one wished to hoard for the distant future. This stimulated production and because it raised prices, checked consumption. Later, when the panic came, the government hoardings were dumped on the market, so that an abnormal supply appeared. This in part accounts for the severity of the panic in 1921. It does not account for the continuance of the agricultural depression, because the government hoardings were disposed of before 1922.

TABLE VIII
ACREAGE OF WHEAT
(Millions of Acres.)

Year	United States, Canada, Argentina, Australia, India	United Kingdom, Italy, Germany, France, Netherlands	Total
1909	98	34	132
1910	104	35	139
1911	114	35	149
1912	112	35	147
1913	116	34	150
1914	118	33	151
1915	133	33	166
1916	127	30	157
1917	120	27	147
1918	140	28	168
1919	144	28	172
1920	131	29	160
1921	137	31	168
1922	136	30	166
1923	137	31	168
1924	133	30	163

Low consumption.—A considerable part of Europe is very poor, and is consuming much less than normal. Not only is the total consumption less, but in much of Europe, potatoes and other products that normally would be fed to livestock are being eaten by the people. Since a larger population can exist on vegetables than can

live on the meat produced from them, the shift in consumption makes an apparent surplus.

Reduction of exports to Europe.—Every country of Europe is bending its efforts toward reducing imports and increasing exports. Since these countries are all very poor, they are anxious to become self-sufficient on the food question. In these efforts they are meeting with much success,—so much so that in spite of the low prices of farm products, American exports are rapidly approaching the pre-war quantity. Some persons have thought that the solution of the farm problem could be brought about by increasing exports. It is more probable that our exports will continue to drop, and that they will even go below the pre-war level.

High production of cattle and horses.—Had there been no war it would have been expected that cattle and horses would have been low in 1920 to 1924, because there are periods of over- and under-production of both of these of fairly definite lengths and both were due for low prices in any event. The introduction of automobiles, trucks, and tractors further hurt the horse business and the market for horse feeds.

Inflation followed by deflation the primary cause.—While each of these factors as well as others have contributed to the agricultural depression, none of them could have brought on a severe depression. The primary cause of the agricultural depression was financial inflation followed by rapid deflation.

TABLE IX

EXPORTS OF WHEAT AND WHEAT FLOUR FROM THE UNITED STATES;
YEAR ENDING, JUNE 30

Year	Exports, Million Bushels	Year	Exports, Million Bushels
1910-1914 average	105	1922	279
1920	220	1923	222
1921	366	1924	156

CHAPTER IV

EFFECTS OF DEFLATION ON AGRICULTURE AND INDUSTRY

Agriculture cannot close down.—When a manufacturer is unable to sell his products at a price sufficient to keep the plant going, he closes the plant. The distress in such a period is in part shared by the unemployed laborers, and is in part shared by the owners of the

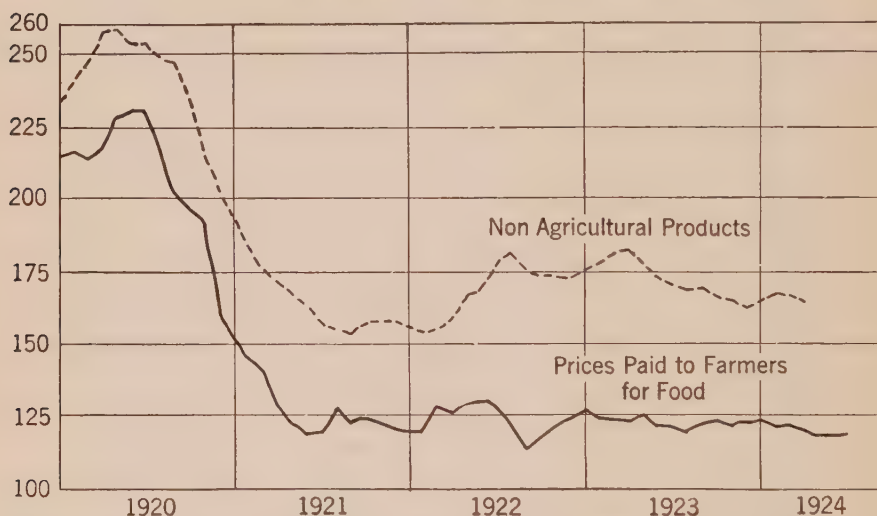


FIG. 7.—When prices fell, manufacturers stopped production, so that prices of non-agricultural products fell less than those of farm products. When the supplies on hand were exhausted, new production was started at high prices. Since farm production cannot be stopped quickly, prices of farm products fell more rapidly and remained low longer.

plant, but much of the difficulty is passed back to the producers of materials that the plant uses. The plant remains idle until the stocks on hand and in the channels of trade are disposed of and new orders appear. It does not open until the products are wanted badly enough so that they will sell at a price somewhere near the price that existed before the plant closed. Laborers come back at wages that are somewhere near the previous wage level. The price of the

product and the wages paid the workers are very much higher than would have been the case if the plant had continued to operate.

Agriculture is a personal industry. Less than one-fourth of the labor is hired. In a period of depression the farmer may drop the hired labor, but he cannot close his shop, for he is both owner and laborer. His family must live, and his taxes and interest must be paid. If wheat brings little per bushel, he must try to produce more bushels. He works longer hours. His wife helps more with field work. If there are old people in the family, too old to do much, they work more than they normally would. Children work more than usual, and many of them stop attending school at an earlier age than was anticipated. By these means it is possible to maintain agricultural production for a time with a greatly decreased labor force.

In 1922, the net movement of population from farms to cities was 1,120,000.¹ Various estimates place the movement in 1923 at another million persons. Since farm families are larger than city families, there are more persons raised on farms than are needed on farms, so that some net movement to cities is normal. The movement in 1922 and in 1923 was, however, more than normal.

Many persons have wondered how such a movement could take place and have the acreage of farm crops decline so little. Yet this is just what would be expected. It is a result of the combined influence of three factors: (1) the long hours and increased family labor on farms; (2) the neglect of farm maintenance and farm improvements; and (3) the increased efficiency with which farm work is done.

Farm improvements formerly required a considerable proportion of the farm labor. Some day these neglects must be made up by the expenditure of more hours of labor than would have been required if the work had been done at the right time; but temporarily the farmer can neglect these and have more time available for crop production. For many years farmers have been driving more horses per man. This movement has been given a great impetus during the agricultural depression. The farmers are using many other means of saving time.

Even if agriculture were organized on the basis of hired labor, it could not close down in periods of hard times. Agriculture is a biological rather than a mechanical industry. If a manufacturer

¹ Wallace, H. C., Annual Report of Sec. of Agr., U. S. D. A., p. 8, 1923.

Wallace, H. C., The Wheat Situation, a Report to the President, p. 36, 1923.

closes his plant, it will be there when he wants it again. A farmer cannot stop feeding his pigs and horses. He cannot stop his cropping system, if he hopes to go back into farming again. Agriculture is not a one-year business.

The point of view of many farmers is well expressed by the following report that A. B. Genung gives of a conversation with a corn-belt farmer:²

"He was in debt. His equity had been pretty well wiped out—not by fire, but by the withering, shriveling blast of the deflation period, with collapsed prices and land values.

"‘Yes,’ he admitted quietly, ‘I’m hit and hit hard. Most of

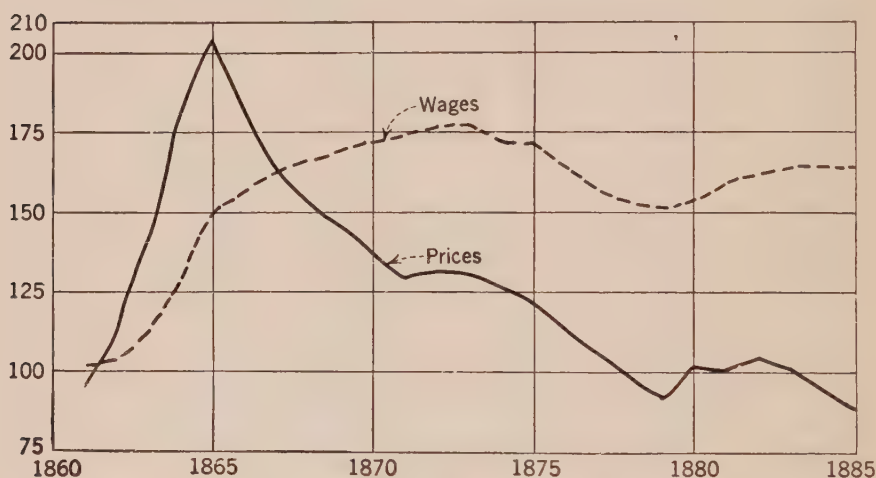


FIG. 8.—Wages and prices during the Civil War period. Wages rose less rapidly than prices, and also fell less rapidly. When prices fall, it takes many years to reduce wages.

the neighborhood is in the same fix. Our work for three years—my wife and boy and myself—has not brought in enough to pay our taxes and interest. And we’ve worked all right, early and late.

"‘But I don’t need to tell you how things are, you see it all over the country.

"‘Am I going to stick on the farm? Yes.

"‘I’m not fitted to work in town. We’re country-minded people and this is a good farm. These are hard times, discouraging times. I’m glad the boy isn’t old enough to go away to work yet, for he’d certainly want to, in the face of conditions now.

² Genung, A. B., "Looking Ahead," *Better Crops*, p. 16, June, 1924.

“ ‘The reason I’m going to stick to my guns is because I believe the tide will turn by and by. It don’t stand to reason that things will go on this way many years. I can swing the thing, with good luck, and some day that boy will be mighty glad to be the owner of this place. I’ve seen hard times before. They don’t last forever. If a man ever ought to have his backbone with him, it’s now. That’s one of the few things I still have left—my nerve, and if it ever weakens a little sometimes, my wife is on hand with a brand that don’t weaken.

“ ‘We’ll stick. You come back here ten years from now and you’ll say we were wise.’ ”

Agriculture a very slow industry.—If one raises a dairy cow, she is a constant source of expense for over two years. Production does not reach its maximum for several more years. The farmer hopes that the cow will pay for the investment in raising her by the time she is perhaps eight years old. If he raises a colt, it is a ten-to-fifteen-year investment. Tile drains are a fifty-year investment. A good farm barn is expected to pay for itself in about fifty years. Orchards in New York take fifty-four years to reach their prime. For such reasons, capital investment in agriculture is very high in proportion to receipts. The rate of turnover varies with the type of farming. For the entire United States, it probably requires an average of about eight years ³ to make sales equivalent to the total capital invested. A decline in the general price level makes this period much longer. A business that has a turnover three times a year has as good a chance to get adjusted to deflation in a year as does agriculture in a generation.

It follows that agriculture is injured much more than is the usual type of city business by a period of declining prices. It is no accident that farmers are the ones who become most critical when the purchasing power of the dollar is suddenly raised. Agriculture cannot prosper with a continuously declining price level.

Agriculture not incorporated.—Another difference between agriculture and industry, that one must understand before he can appreciate the effect of deflation on agriculture is that agriculture

³ King, W. I., and others, *Income in the United States*, Vol. II (1922), p. 55.

Total value of animal products plus crops sold or consumed in 1909 to 1911 averaged \$5,500,000,000. The census showed the value of farm property to be \$41,000,000,000 in 1910, showing a turnover once in 7.5 years. But considerable of this income is in products consumed by the farm family, and is not cash.

is an individual business. It is not incorporated. The normal history of a farm business is the history of an individual.

The question is often asked, "Why did the farmer not save his money when times were good, so that he could stand the hard times?" A large part of business being done by corporations, the corporation idea has permeated popular and scientific thinking to such an extent that questions like this are common, and are pertinent when applied to business organizations that go on continuously. But personal business depends on the age of the man. Many farmers did save when prices were high, and many of them are picking up additional land and stock that their neighbors are forced to sell. But the young man who was most thrifty and saved the most money and who bought a farm in recent years did not have time to get out of debt. Paying for a farm is frequently a lifetime job. Many of these young men would have been better off financially at the present time if they had not saved money, for then they could not have bought farms.

The purchase of farms is much like the purchase of houses in cities. Homes are bought by thrifty persons in accordance with the time when they were born. Those who bought before the recent rise in prices in cities were lucky. Those who are now buying may be less fortunate. Many young families are buying homes at double the pre-war prices. If the building boom collapses, those who have bought with small cash payments are likely to lose their savings, just as young farmers are losing theirs. There is this difference—that the young farmer buys both a home and a business. His investment is therefore greater; and the loss of his farm means not merely the loss of his home, but the loss of his job as well.

Agriculture not self-sufficient.—The process of commercialization of agriculture has been very rapid, particularly in the past 20 years. Probably American agriculture is more specialized and commercialized than any agriculture ever before developed. Farmers used to produce most of their necessities, but to-day they depend on purchased machinery, twine, feeds, fertilizers, and drains; and raise less of their own food supply than was formerly the case. With the high development of transportation, they found it profitable to produce in larger quantities the things that were best adapted to the region, and use the cash income for purchase of many things that might have been raised for their own use.

Formerly most of the population was kept busy farming, each

family raising its own supplies. But with the commercialization of the industry, less than one-third of the population feeds and clothes the Nation, with much cotton, pork, and wheat to spare.

When things are going along in a well-balanced way, the commercialization of agriculture is for the best interests of both city and country. But if something happens to throw the prices of things that the farmer sells out of their proper relation to things that he buys, serious difficulty occurs.

The natural accompaniment of commercialization is the use of credit. There has been a steady increase in the percentage of mort-

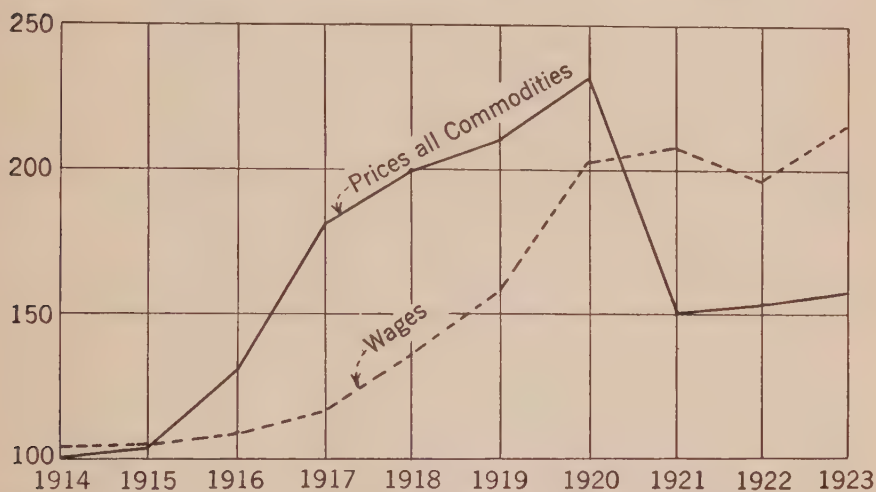


FIG. 9.—Wages and prices during the World War period. Wages rose less rapidly than prices, and fell less rapidly.

gaged farms and in other debts. When conditions are normal this is not a bad sign. It only means that farming is becoming more of a business and less of a Robinson Crusoe life. Men borrow money to buy and equip farms and to make farm improvements, just as other persons borrow money for business purposes. Debts are not a sign of lack of business ability, more frequently they are a sign of vigorous activity. But farming remains a business with a slow turnover, so that the greater volume of indebtedness becomes a great misfortune when prices suddenly fall.

At the same time that agriculture has come to depend more on credit, the counties, states, and Nation have extended their operations, and have made greater use of credit. Much is now done collec-

tively that formerly was not done at all, or that was done by individuals. When done by the public, such enterprises become the basis for bond issues. Taxes, therefore, are a much larger item than formerly and become a very serious matter when prices fall.

Wages lag behind prices.—When prices rise, wages rise less rapidly. This fact has far-reaching effects on the relationships between prices of different things. When prices are falling, wages again lag behind. This holds true in all countries, and is always the case when inflation or deflation occurs. The course of wages during the Civil War compared with wholesale prices is shown in

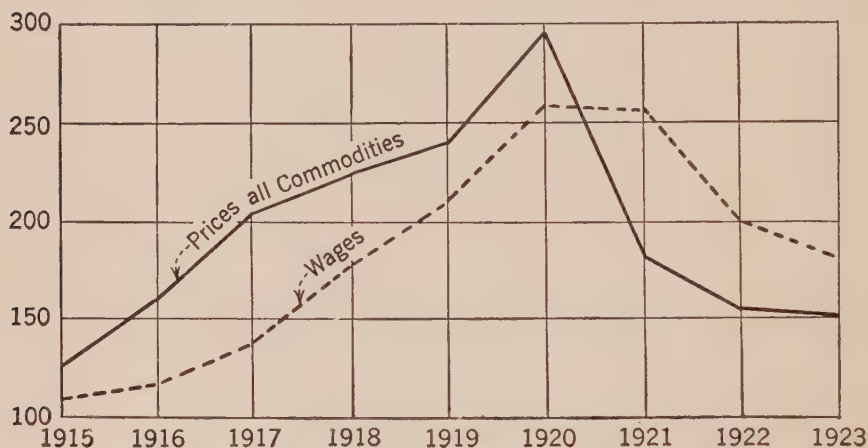


FIG. 10.—Wages and prices in England. Wages rose less rapidly than prices, and, in spite of the long period of unemployment are still higher than prices.

Fig. 8. The same relationships for the World War period are shown in Fig. 9.

Some persons believe that the failure of wages to decline is due to labor unions. Labor unions have some influence, but the general result is wholly independent of labor unions. Those who hold the erroneous view that the present high wages are due to labor unions would do well to explain how it is that wages always lag behind prices when prices are rising, as well as when prices are falling. Is this lag also due to labor unions?

The lag of wages, and the lag in taxes and interest, are the major causes for the innumerable maladjustments that result from inflation and deflation. The change in the value of money is, of course, the major cause, but the lag in wage adjustments becomes, in turn, the cause of many other difficulties. When prices are rising and

wages lag, the cheaper kinds of food are in demand. Economies are practiced in the use of clothing and houses. Building is checked. When deflation takes place, the choicer kinds of food are in demand, the demand for clothing is high, and a building boom develops.

All of the costs of manufacturing and handling commodities remain on a high basis, so that the cities prosper at the expense of the country. But periods of unemployment are frequent and severe when deflation is in progress.

Effects of inflation and deflation.—A few of the many effects of inflation and deflation are listed below:

Inflation	Deflation
Prices rise	Prices fall
Wages of unskilled labor lag; real wages are low	Wages of unskilled labor lag; real wages are high
Wages of skilled labor lag more than those of unskilled	Wages of skilled labor lag more than those of unskilled
Professional wages lag most of all	Professional wages lag most of all
Demand for labor is large	Unemployment frequently occurs
Demand for credit is large	Demand for credit is small
Reckless business expansion takes place	Business is retarded
Few business failures occur	Many business failures
Thrift is punished	Thrift is unduly rewarded
The borrower gains	The borrower loses
Fixed incomes suffer	Fixed incomes gain
Rents lag and are low	Rents lag and are high
Freight rates lag and are low	Freight rates lag and are high
Taxes lag and are easy to pay	Taxes lag and are high and difficult to pay
Buying is in advance of need, hoarding results	Buying is delayed
Selling is easy	Selling is difficult
Cooperation is stimulated	Cooperation is depressed
Fire losses are low	Fire losses are high
Labor unions multiply	Labor unions are retarded
Strikes are numerous	Strikes are less numerous
The man holding goods prospers	The man holding goods suffers
Bond holders suffer	Bond holders prosper
Products with slow turnover profit most	Products with slow turnover suffer most
Farming prospers	Farming is more depressed than most industries
City dwellers are radical	Farmers are radical

CHAPTER V

TAXES

Uses the farmer makes of his income.—If all the farmer's money were used for the purchase of general commodities, he would be concerned with the price paid to producers for farm products and the price that he has to pay for retail purchases for living and for his business. But some farmers hire labor and are, therefore, concerned with the wages of farm labor and the quantity and quality of labor available. All farmers hire other labor, such as carpenters, blacksmiths, and the like, so that they are concerned with the amount of farm products necessary to hire these persons. One of the most important considerations is the payment of interest and taxes.

1912

Public Debts 1922

FIG. 11.—Public debts in the United States increased over fourfold from 1912 to 1922.

Farmers, therefore, are concerned with the quantity of farm products necessary to make such payments. In so far as the money goes for these purposes, it is the money price of farm products and not their purchasing power that is important. For the farmers who bought farms in recent years and who are not out of debt, these items are the dominant ones. In a large measure they can stop buying clothing, farm equipment, and can greatly reduce expenses for food; but there is no way to escape taxes, interest, and payments on debts. The portion of the farming population that is in comfortable circumstances is most concerned with the comparative prices of what they sell and what they buy, but the portion of the population now in financial difficulty is concerned with the quantity of farm produce required to pay interest, taxes, and debts.

Public debts.—The total public debt in the United States in 1912 amounted to nearly 7 billion dollars. In 1922, the total debt

was nearly 31 billion dollars. In ten years the debts increased fourfold. The national debt increased seven times, the state debts nearly three times, county debts over three times and the debts of other incorporated places nearly doubled; other civil divisions increased eight times. The total debt for all divisions of government increased over four times. The total debt in 1912 was about \$70 per capita, and by 1922 had increased to \$284 per capita.

TABLE X
NET PUBLIC DEBTS IN THE UNITED STATES *
Millions of Dollars

	1912	1922	Index Number for 1922 when 1912 = 100
National (1913 and 1923).....	2916	22,156	760
States.....	346	936	271
Counties.....	372	1,255	337
Incorporated places.....	2885	4,709	163
All other civil divisions.....	220	1,797	817
Total.....	\$6738	\$30,853	458

* Public Debt, U. S. Dept. of Com., Bur. of Census.

The 31 billion dollars of public debts are owed to certain classes of American citizens. They must be paid by the American tax payers. It is evident that most of the debts were contracted at a time when prices were very high. The persons who lent the money lent cheap money. The public that borrowed the money and spent it when prices were high received a relatively small quantity of things in exchange for the debt. If this debt is paid when prices are low, the lenders will be able to buy a much greater quantity of goods than they could have bought with the money at the time when they lent it.

Taxes.—The National Industrial Conference Board estimated the federal, state and local government tax bill at 2194 million dollars in 1913, and 8363 million dollars in 1921.¹ Although taxes imposed by the Federal Government declined 1516 million dollars in 1922 as compared with 1921, the taxes collected by state and local government continued to advance.

¹ Taxation and National Income, Natl. Indl. Conf. Bd., Research Report 55, Oct., 1922.

A study of taxes in 36 States indicates that taxes in 1922 were 8.4 per cent greater than in 1921. In 1922 state taxes were 276 per cent of the 1913 level and local taxes were 271 per cent. During the same period the national income as estimated by the National Industrial Conference Board was 170 per cent of the 1913 level. In 1913 about one dollar in every sixteen was devoted to public expenses, and in 1922 one dollar in every eight was used to pay taxes.

TABLE XI
TAXATION AND NATIONAL INCOME, UNITED STATES*
Millions of Dollars

Year	TAXES				National Income	Per cent taxes are of national income
	Federal	State	Local	Total		
1903	521	155	706	1382	20,500	6.7
1913	668	307	1219	2194	34,400	6.4
1919	5069	570	2395	8034	66,251	12.1
1921	4430	783	3150	8363	50,000	16.7
1922	2914	846	3301	7061	58,500	12.1

* Tax Burdens and Exemptions, Natl. Indl., Conf. Bd. Research Report 64, p. 13, 1923.

Increase in taxes on farms.—When taxes before the war are called 100, taxes in Kansas in 1921 were 271, in South Dakota 229, and in Washington 337, Table XII.

TABLE XII
TAXES PER ACRE ON FARM LAND *

State	1913	1914	1919	1921
Kansas.....	\$0.17	.....	\$0.33	\$0.46
South Dakota.....	0.24	.....	0.54	0.55
Washington (20 counties).....	.....	\$0.35	.....	1.18

* Wallace, H. C., The Wheat Situation, a Report to the President, pp. 107-108, 1923.

The taxes per acre paid by farmers in the United States for the year 1913-14 averaged \$0.314 and in 1921-22 averaged \$0.709, or an increase of 126 per cent.² For the area as reported by the Census

² Yearbook, 1922, U. S. Dept. of Agr., p. 1002.

of 1920, this would call for an annual payment of \$678,000,000. Since that time, taxes have continued to rise. What such an amount means is better understood when compared with the sales of wheat. For the three years 1921-23 the sales of wheat from American farms would about pay the land-tax bill.

On farms in Ohio, Indiana, and Wisconsin, the business receipts less all farm business expenses except taxes, in 1913, averaged \$1147 per farm. Taxes averaged \$112 per farm; that is, taxes amounted to 9.8 per cent of the net income before taxes were deducted. Prices rose faster than taxes: in 1918 taxes represented

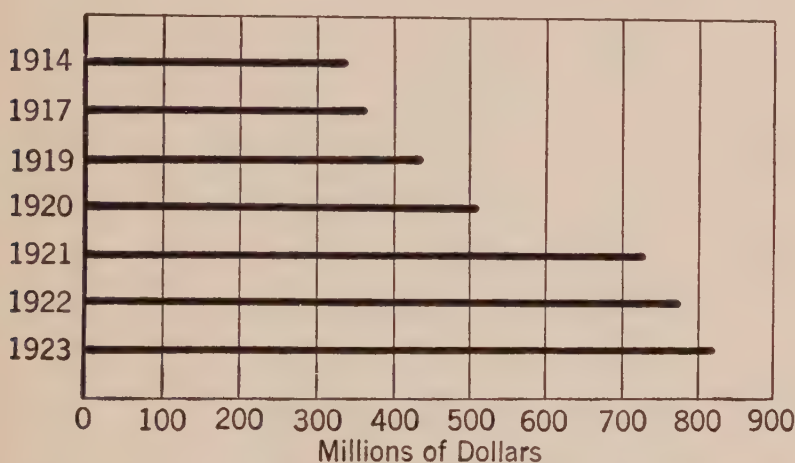


FIG. 12.—General property taxes paid by farmers, in millions of dollars. Although the agricultural depression began in 1920 and continued with extreme severity, the property taxes paid by farmers were still increasing in 1923.

only 6.7 per cent of net income. But when taxes rose and prices fell, the reverse was emphatic, for in 1921 the income above business expenses other than taxes dropped to \$771 per farm, while taxes rose to \$253, so that taxes required 33 per cent of the income.³ Expressed in another way, it required over twice as many hogs or beef cattle, two and a half times as much corn, or a half more than the pre-war amount of butter to pay the taxes.

Other significant figures of the same kind are available. On dairy farms in Chenango County, New York, the receipts less business expenses other than taxes, in 1921, amounted to \$795 per farm. Land taxes were \$161, or 20 per cent of the income.

³ Wallace, H. C., *The Year in Agriculture*, Yearbook, 1922, U. S. Dept. of Agr., p. 7.

This left \$634 to reimburse the farmer for his year's labor, for the labor of his family and for the use of a capital of \$12,943. This was available for payment of interest, debts, and living expenses. Of this amount \$116 was spent per farm for clothing, \$312 for food, and \$130 for all other living expenses.⁴ On 25 farms in Washington County, Ohio, for the four years 1912-15, taxes and insurance amounted to 9 per cent of the receipts less business expenses other than taxes and insurance. In the following four years of high prices, they amounted to 6 per cent of the income, and in 1920 to 15 per

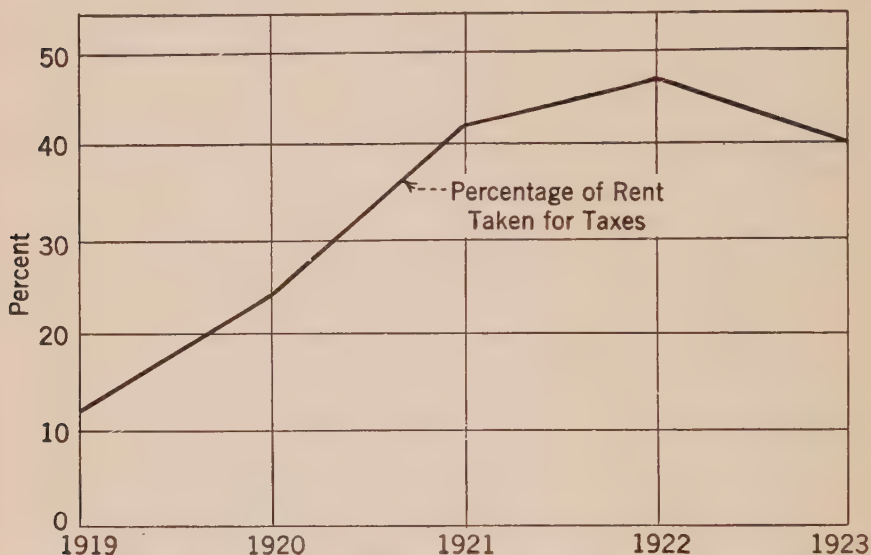


FIG. 13.—Percentage of the rent required to pay farm taxes in Indiana. Taxes took about one-eighth of the rent in 1919, but in 1922 they took nearly half of the rent.

cent. For 60 farms in Oregon, taxes increased 134 per cent from 1914 to 1921. At the latter date they were 33 per cent of the receipts less expenses other than taxes.⁵ For 158 farms in the Palouse Area of Idaho and Washington, taxes and insurance in 1920 took 24 per cent of the receipts less expenses other than taxes and insurance.⁶

⁴ Misner, E. G., *Economic Studies of Dairy Farming in New York*, Cornell Univ. Agr. Exp. Sta. Bull. 421 (June, 1923).

⁵ Gunn, R. V., *Report to Legislative Tax Committee on a Special Farm-Management Survey of 117 Representative Oregon Farms for the Year 1921*. (Mimeograph.)

⁶ Preliminary report of cost of production and farm business analysis. Survey on 229 farms for 1919, and 241 farms for 1920, Palouse Area, Idaho, and Washington. U. S. D. A., Office of Farm Management and Farm Economics, June, 1922. (Mimeographed.)

For farms in Niagara County, New York, taxes for 1913 to 1916 averaged 6 per cent of the receipts less cash expenses other than taxes. In 1921 taxes were 13 per cent.⁷

Relation of taxes and rent.—For farmers in three counties in Indiana, general property taxes took 12 per cent of the rent in 1919.

For the three years 1921-23, taxes took an average of 43 per cent. In one county the average for the three years was 56 per cent. These taxes should please the single taxpayer for the net rent that the owner receives is undoubtedly less than enough to pay interest on the improvements that have been made. More than all the rent for the land itself goes to the government.

About one-half of the increase in the percentage of the rent paid as taxes was due to decreasing rents and one-half to increasing taxes. The increase in taxes was due in part to public improvements that were made when times were good. In order to make these improvements, the public borrowed money when money had a low buying power. The improvements are paid for when money has a high buying power. The public, therefore, has improvements that cost more than they are worth at present prices and the bondholder receives money that will buy more than would the money that he lent.

A very large part of the increase in taxes is due to the wages of teachers and other public servants. When prices are rising these wages lag behind prices by many years. When prices are falling they likewise lag.

TABLE XIII

PERCENTAGE OF RENT PAID AS GENERAL PROPERTY TAXES, TIPTON, MIAMI, AND MONROE COUNTIES, INDIANA.*

Year	Net Rent per Acre before Deducting Taxes	Taxes per Acre	Per Cent of Rent paid in Taxes
1919	\$7.49	\$0.90	12
1920	5.11	1.11	24
1921	3.98	1.54	42
1922	3.71	1.60	47
1923	4.25	1.41	40

* Press release, Bur. Agr. Econ., U. S. Dept. Agr., Mar. 25, 1924.

⁷ Scoville, G. P., unpublished data.

Delinquent taxes.—The tax bill is the prior lien on land. It is usually the first bill to be paid. The extent to which taxes are delinquent is therefore a measure of farm conditions. In different parts of Kansas in 1922, delinquent taxes varied from approximately 3 to 7 times the number of delinquencies in 1917. The western part of the State had the highest per cent of the delinquencies.

TABLE XIV
INCREASE IN DELINQUENT TAXES, KANSAS, 1917-1922.*
(1917 delinquent taxes = 100 per cent.)

Divisions of the State	1917	1918	1919	1920	1921	1922
Northeastern, general farming.....	100	122	141	222	343	264
Southeastern, general farming.....	100	113	68	82	98	271
Flint Hills, grazing.....	100	120	121	126	433	742
Central, wheat farming.....	100	153	161	219	489	570
Western, grazing.....	100	133	215	275	417	468

* Wallace, H. C., The Wheat Situation; a Report to the President, p. 104, 1923.

Use of tax money.—In Kansas 30 per cent of the tax money goes to schools and in South Dakota 49 per cent. The remaining portions go to the state, county, and township. Most of the tax money goes for the payment of wages or bonds.

TABLE XV
PURPOSES FOR WHICH TAXES WERE PAID IN 1921*

State	Percentage of Taxes Devoted to			
	State	County	Township	School
Kansas.....	18	38	14	30
South Dakota.....	11	31	9	49

* Wallace, H. C., The Wheat Situation; a Report to the President, pp. 107-108, 1923.

Taxes are most serious in the marginal regions. In such regions the income and the land values are very low. The number of schools needed for a given area is as high as in good regions if the schools are to be in walking distance. Roads are also an excessive burden even though the roads, like the schools, are very poor. Records for

146 farms in one township were obtained for 1923, of these farms 66 were uninhabited in 1923. Taxes were obtained for 71 farms. The taxes averaged 3.4 per cent of the market value of the farms. (Few of the farms could be sold for the values used.) On 6 farms the taxes were over 10 per cent of what the farmers thought the market value ought to be. There is, however, no real market value when taxes are so high, since it is very difficult to sell such farms.

School teachers' wages.—Since so much of the tax money goes

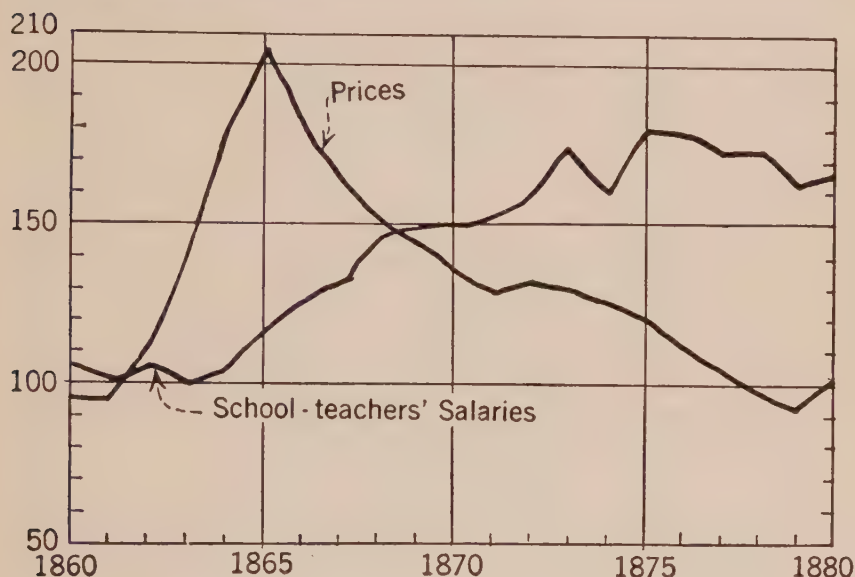


FIG. 14.—Wholesale prices and teachers' wages during and after the Civil War period. Teachers' wages are the largest single item in farm taxes. When prices rise, the pay of teachers rises less rapidly. When prices fall, the pay of teachers falls much more slowly.

for payment on bonds and so much for payment of teachers' and other wages, there is little hope for a large reduction of taxes in the near future. Teachers' wages lagged behind prices when going up and when coming down, just as they did following the Civil War.

School teachers' wages, which represent such a large proportion of farmers' taxes, rise slowly when inflation takes place and fall slowly when deflation takes place. The Civil War experience is illustrated in Fig. 14. This experience is being repeated. Comparatively little can be done in the reduction of taxes, as it takes many years to get taxes adjusted to a low price level.

Reducing the tax burden on farm land.—The reduction of income taxes has aroused much interest. These taxes are of concern to well-to-do people in cities, but are of little interest to farmers who are in distress. There is little chance of reduction in expenditures in which the farmer is primarily interested. In the wealthier states, income taxes may be depended upon to a great extent for the payment of state and school expenses. This would help the tax question by shifting a larger proportion of the taxes from land to incomes. When our present taxation methods were first introduced, income was nearly all derived from land, so that the value of the land held represented comparative ability to pay. This is no longer the case.

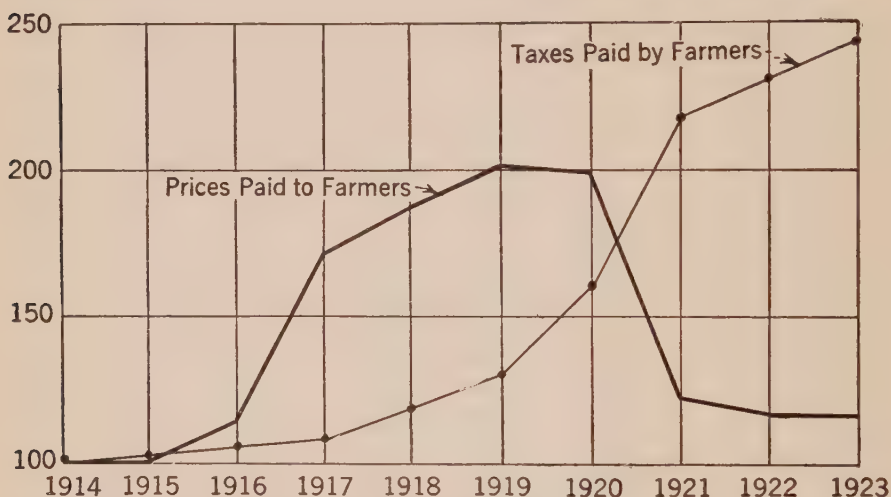


FIG. 15.—Taxes paid by farmers, and prices paid to farmers for food products. Prices fell suddenly, but taxes continue to rise.

Before the industrial revolution, the wealth that originated in the community mostly remained there. The profit that the farmer made from growing a hide, the profit of the tanner, and the profit of the shoemaker all remained in the community where the profit originated. With industrialization, the profit that the buyer of shoes contributes results in tax payments in the region where the man who made the profit happens to live, rather than in the region from which the profit came. The profits that a railroad makes are derived from the entire territory in which business is done. Taxes are usually paid in the school district where the railroad happens to be.

Distribution of the tax burden.—According to the National Industrial Conference Board the tax burden on agriculture is greater

than the burden on the rest of the community. The farmers' tax bill increased from 624 million dollars in 1913 to 1497 million dollars in 1921. The total tax bill was reduced 1302 million dollars in 1922, but the farm taxes dropped only 61 million dollars. The large reduction in various kinds of taxes by the Federal Government was of little value to farmers. Although the amount of taxes decreased slightly, the percentage of the total tax bill paid by farmers increased from 15 per cent in 1919 to 20 per cent in 1922.

TABLE XVI

DISTRIBUTION OF THE NATIONAL TAX BILL BETWEEN FARMERS AND THE REST OF THE COMMUNITY *

Millions of Dollars

Year	Property Taxes			All Taxes		
	Paid by Farmers	Paid by Rest of Community	Per Cent Paid by Farmers	Paid by Farmers	Paid by Rest of Community	Per Cent Paid by Farmers
1913	308	917	25	624	1570	29
1919	556	1860	23	1232	6802	15
1921	752	2526	23	1497	6866	18
1922	787	2635	23	1436	5625	20

* Tax Burdens and Exemptions, Natl. Indl. Conf. Bd., Research Report, 64, p. 29, 1923.

Before the war, about one-tenth of the farmers' income and about one-eighteenth of the income of the rest of the country was paid in to taxes. In 1919, when property taxes lagged and farm prices were high, and income and excess-profits taxes on industry were high, the farmers paid only 8 per cent of their incomes as taxes; the rest of the country turned in 13 per cent of their incomes. When farm prices fell and excess-profits taxes, and the like were reduced, the farmers' tax burden increased, and one-seventh of his income was taken by taxes. The tax burden paid by the remainder of the community absorbed less than one-ninth of their incomes in 1922. In view of these facts it is not difficult to understand why farmers were little interested in the various plans to reduce income taxes.

TABLE XVII

DISTRIBUTION OF TAXES IN RELATION TO INCOME OF THE UNITED STATES*
Millions of Dollars

Year	National Income		Taxes		Ratio of Taxes to Income	
	Agriculture	Rest of Community	Paid by Farmers	Paid by Rest of Community	Farmers	Rest of Community
1913	5,887	28,513	624	1570	10.6	5.5
1919	14,835	51,416	1232	6802	8.3	13.2
1921	8,715	41,285	1497	6866	17.2	16.6
1922	10,057	48,443	1436	5625	14.3	11.6

* Tax Burdens and Exemptions, Natl. Indl. Conf. Bd., Research Report, 64, p. 32, 1923.

CHAPTER VI

DEBTS

Some farmers born at the wrong time.—Farming is not incorporated. It is a personal business. A man enters it at a certain time because he was born at a certain time. If he happens to enter just before a great decline in prices occurs, he is likely to lose all his savings unless he is one of the very few who enter without heavy debts. If a farmer happens to sell his farm in a period of high prices, he is likely to move to town and take his money with him so that it is removed from agriculture. If he dies in a period of high prices, one of his sons may take the farm and buy out the other heirs. With falling prices his inheritance is likely to be lost entirely.

The usual procedure for white farmers in the United States is illustrated by the following data: The writers found that in Jefferson County, New York, of 250 tenants, all but 11 had worked for wages before becoming tenants. Of 418 owners, all but 18 had either worked for wages, or as tenants, or both, before becoming owners. The most numerous group included 206 who had worked both for wages and as tenants before becoming farm owners. The farmers in this group became tenants at an average age of twenty-eight, and owners at an average age of thirty-eight years. For all groups, the average age at becoming an owner was thirty-five years. Usually men go in debt at the time of becoming tenants, and usually they go in debt heavily at the time of becoming owners.

Unusual numbers of new farmers.—When prices are high, an unusually large number of hired men become tenants and an unusual number of tenants buy farms. This is due in part to greater savings and in part to the expectation of continued high profits. A larger percentage of the better than of the poorer farms is sold, and the buyers are the better tenants.

An additional number of young men started farming during the inflation period because of the return of the soldiers. Many of these married and bought or rented farms. Probably the number of

farmers who bought farms in 1919 and 1920 was greater than ever before in an equal period of time.

In the Kentucky blue-grass region, 20 per cent of the farms changed hands in 1920. The prices paid averaged 69 per cent above the 1917 values. Over half of the purchases were made with a cash payment of one-third of the purchase price or less, and 71 per cent were with payments of half or less. Of the buyers, 21 per cent were owners for the first time. Their average age was thirty-nine years. Manifestly, those who had never before owned a farm did not have

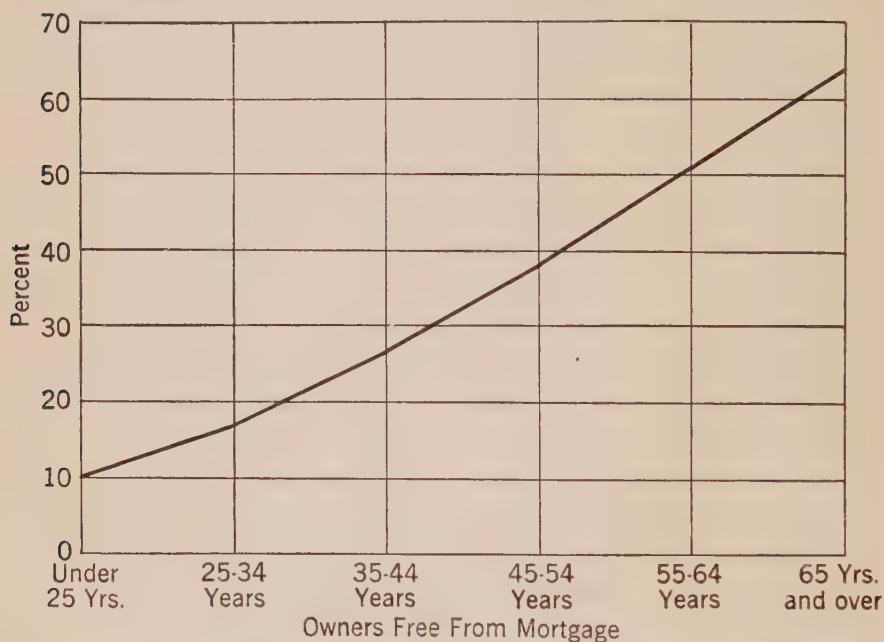


FIG. 16.—Relation of ages of farmers to percentage of mortgaged farms. Most of the young farmers are in debt.

time to pay for it by farming before the panic came. Of all the buyers, 52 per cent had previously been tenants.¹

Records for many farms in Iowa indicate that 9 per cent of the farms were sold in 1919, and that the average price was 28 per cent above the level of a year before. The larger part of the gains made by such sales was received by urban dwellers. Two-thirds of the purchases were made by farmers who expected to farm the land them-

¹ G. W. Forster, Land Prices and Land Speculation in the Blue-Grass Region of Kentucky, Kentucky Research Bull. 240 (January, 1922).

selves. In two-thirds of the cases less than half of the purchase price was paid in cash.²

Young farmers assume heavy debts.—In 1920 only 10 per cent of the farm operators in the United States who were under twenty-five years of age were full owners free from mortgage debt, and only 17 per cent of those from twenty-five to thirty-four years of age were full owners free from mortgage debt. But 64 per cent of those over sixty-five years of age, were full owners free from mortgage debt. Probably a considerable additional number had paid their mortgage notes and sold their farms before reaching the highest age group.

On January 1, 1920, the status of the farm operators was as follows (omitting those mentioned in the footnote to Table XVIII):

Full owners and free from mortgage.....	2,117,459
Full owners, mortgaged.....	1,203,190
Part owners (mortgage not known).....	552,385
Tenants (mortgage not known).....	2,424,493
	<hr/> 6,297,527

Those who are owners and free from mortgage are usually able to withstand an agricultural panic; but a very large percentage of those whose farms are mortgaged and a large part of the tenants lose all their savings, if the panic is severe.

TABLE XVIII

RELATION OF AGE TO STATUS OF FARM OPERATORS IN THE UNITED STATES, 1920*

Operators' Status	Per Cent Having Specified Status					
	Under 25 Years	25-34 Years	35-44 Years	45-54 Years	55-64 Years	65 years and Over
Full owners free from mortgage.....	10	17	27	38	51	64
Owners, mortgaged.....	8	17	22	22	20	14
Part-owners, mortgage not known.....	5	9	11	10	8	5
Tenants, mortgage not known.....	77	57	40	30	21	17

* Fourteenth Census of the United States, 1920, Vol. V, p. 355; 52,056 owners, 30,311 tenants, not reporting age were omitted; 68,449 managers also omitted.

² L. C. Gray, Farm Land Values in Iowa, U. S. D. A. Bull. 874 (August, 1920).

Normally, when a young man buys a farm, he assumes a debt that will require most of his life-time for payment. This is recognized by the Land Bank System, which allows as high as thirty-three years for payment. Interest and payment of principal will go on for years. Some of these obligations have been escaped by foreclosures, bankruptcy, or private settlement; but the major portion of the indebtedness will continue and be a fixed charge in dollars independent of future price levels. A long period of depression will reduce this item by transfers of property to new owners at lower prices; but this is a slow process, and is often disastrous to the seller.

Amount of farm indebtedness.—The Census does not report mortgage debt for farms operated by tenants, nor is any personal indebtedness reported. But of the farms operated by owners, 41.3 per cent were reported mortgaged. The average debt per farm was \$3356 and the average rate of interest 6.1 per cent. The farms averaged 148.2 acres. This would call for an interest payment of \$205 per year. Personal indebtedness on many New York farms averaged about one-fourth of the mortgage debt. In the cotton country, personal indebtedness is larger. If personal indebtedness for the United States averages one-fourth of the mortgage debt, the average total interest payment per farm would be about \$256. If taxes on mortgaged farms are at the average rate per farm, they would amount to \$105 per farm. The total payment of interest and taxes on these mortgaged farms would call for \$361 per year. In 1922 the total probably came nearer to \$400—as both indebtedness and taxes probably had risen. This amount may not seem large; but when it is realized that the total value of all crops produced on American farms in 1921 averaged only \$1075 per farm, and that the total sales of all products per farm are considerably less than this amount, the figures become more significant.³ If the averages are as given, it follows, of course, that large numbers have more than the average debt and are worse off than average figures indicate. Since the total number of owners whose farms were mortgaged was nearly a million and a half, the number who are not able to meet their interest payments is large.

Price levels when debts were incurred.—In Chapter IV it was shown that normally over seven years are required to make sales equal to the capital invested in agriculture. The average price level

³ Yearbook, U. S. D. A., 1922, p. 985. Estimated crop value divided by the number of farms as given by the Census.

for the seven years ending with 1923 was 183, the five-year pre-war average being 100. More than the usual amount of farmers' debts were contracted from 1917 to 1920, as the purchases of farms, new equipment and the making of repairs were then large and have all been small since that period. The average of the present (1924) farm indebtedness has doubtless been contracted at a price level at

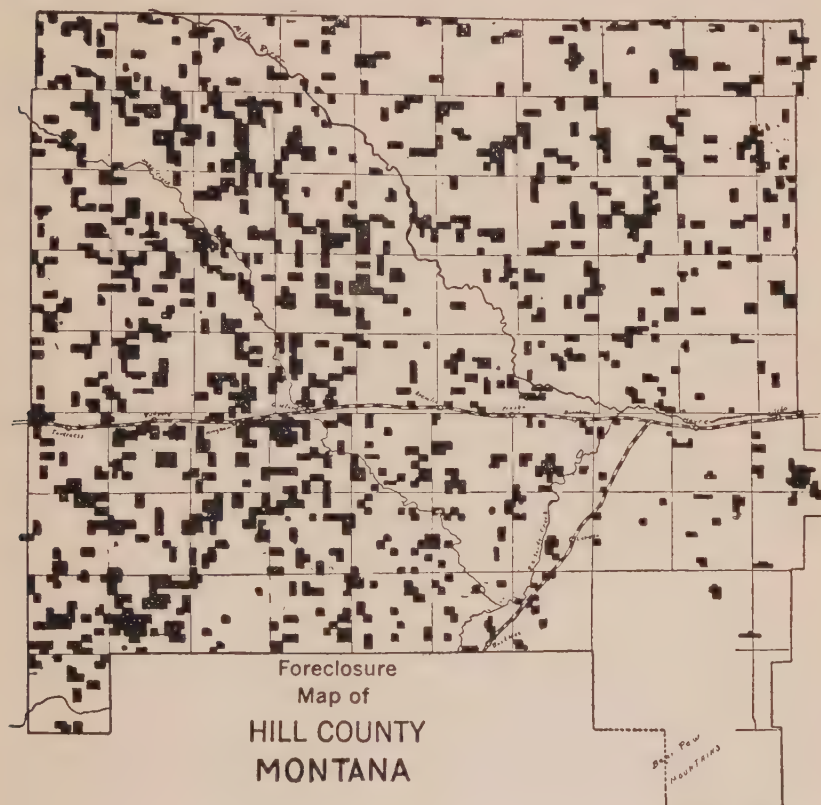


FIG. 17.—Farms in Hill County, Montana, that were foreclosed on, and those in process of being foreclosed. (M. L. Wilson.)

least 75 per cent above the pre-war basis. Public debts were contracted on an even higher price level.

For 107 farms in Tioga County, New York, 59 of which were mortgaged, 73 per cent of the mortgage indebtedness remaining unpaid in 1922 had been originally incurred in 1919 to 1921. Less than 3 per cent of the mortgage indebtedness was incurred in 1922, and practically no new debts have been incurred since, although some have been renewed or refunded. Tenants and others who normally

would have bought farms in 1922 had bought in previous years. Land was practically unsalable in 1922, and none of these farms were sold in that year. Weighting every unpaid mortgage by the price level at the time when the mortgage was originally incurred gives a weighted average price level of 181, when the United States Bureau of Labor index of wholesale prices of all commodities from 1910-14 is taken as 100. Of the notes and accounts remaining unpaid, 56 per cent were incurred in 1922. Including these with the mortgage debt, the average price level at the time of incurring all debts remaining unpaid was 179. On 102 farms in Genesee County, New York, 40 per cent of the mortgage debt remaining unpaid in 1922 had been incurred since 1916. In this region few farms were sold during the war period.⁴

These figures show the great injustice that has come to debtors by the fall in prices, and the much greater injustice that is to come if prices return to the pre-war basis. Since the various units of government are great debtors, similar injustice will be done to the taxpayers.

Justice between debtors and creditors.—One of the reasons urged for returning to pre-war prices is that all of the persons who lent money before the war and who have not yet been paid will not receive the purchasing power which they lent unless prices return to the pre-war basis. The total mortgages on farms operated by owners, outstanding in 1910, amounted to \$1,700,000,000. In 1920 they amounted to \$4,000,000,000.

Since many of the loans in force before the war were paid, it is evident that a relatively small injustice would be done to lenders by the maintenance of a price level about 75 per cent above pre-war. Even this price level would result in great benefit to creditors at the expense of debtors because many of the debts were incurred when prices were double the pre-war level.

Public debts even more striking.—Public debts of the nation and various subdivisions were less than 7 billion dollars in 1912 but were nearly 31 billion in 1922. The injustice of a high price level to the few bondholders who lent money to the government before the war and who have not yet been repaid would be very small in comparison with the injustice of a low price level to the taxpayers who must pay the many billions of debts contracted when prices were double the pre-war.

⁴ Myers, W. I., unpublished data.

If a low price level is maintained, the taxpayer must contribute to the bondholder enormous quantities of goods to which the bondholder is not entitled. In addition nearly all of the public debts are exempt from income taxation. According to the National Industrial Conference Board, one-sixth of the national wealth is tax-exempt.

Number of bankruptcies.—Reports gathered by the United

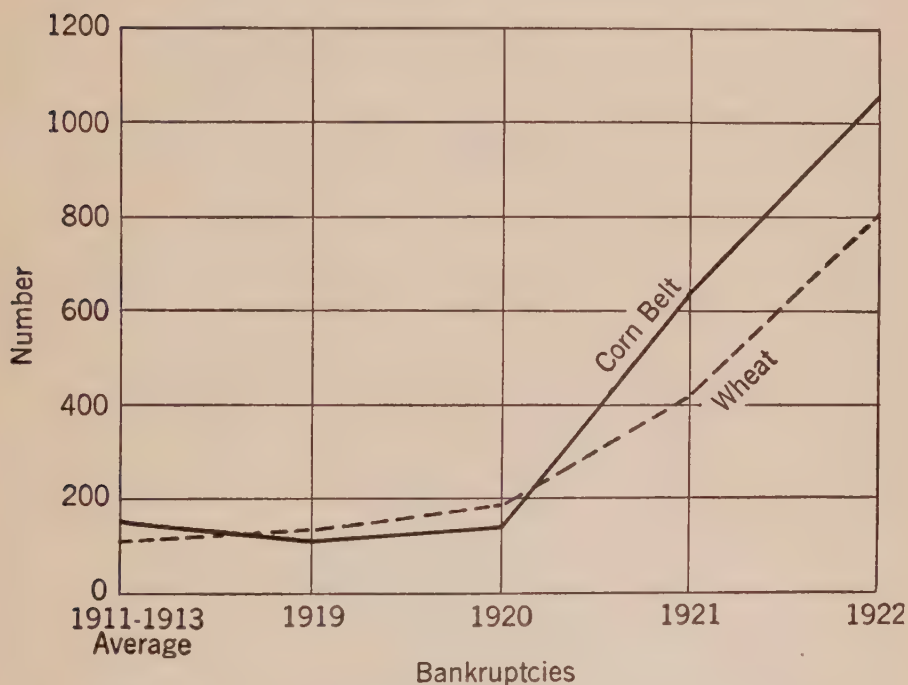


FIG. 18.—Number of farm bankruptcies in the corn belt and in the western winter wheat region. In 1922, the number of failures was six to eight times the pre-war average.

States Department of Agriculture for the period January, 1920 to March, 1923, for 94,000 farmers in 15 western states, indicated that 4 per cent of the owners lost their farms through foreclosure or bankruptcy, 4.5 per cent turned their farms over to creditors without legal proceedings, or 8.5 per cent lost their farms. In addition, more than 15 per cent were in fact bankrupt, but still held their farms. The percentage of farm owners who lost their farms varied from 6 per cent in the North Central States to nearly 20 per cent in the

TABLE XIX

THE FINANCIAL CONDITION OF FARMERS IN THE WHEAT-PRODUCING REGIONS,*
JANUARY, 1920, TO March, 1923

State or Region	Farmers who Lost Farms or Property Through Fore- closure or Bank- ruptcy	Farmers who Lost Farms or Property Without Fore- closure or Bank- ruptcy	All Farmers who Lost Farms or Property	Farmers who Retained Farms or Property Through Leniency of Creditors	Lost Farms or Property Through Unwise Invest- ments
	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent
Total (15 States).....	4.74	5.34	10.08	16.28	0.46
Eastern winter wheat region:					
Ohio.....	2.72	3.82	6.54	8.08	0.60
Indiana.....	3.25	4.24	7.49	13.26	.36
Illinois.....	3.19	4.05	7.24	16.87	.38
Iowa.....	4.85	5.93	10.78	14.93	.62
Missouri.....	3.81	5.95	9.76	20.06	.41
Total.....	3.54	4.80	8.34	14.68	0.47
Western winter wheat region:					
Kansas.....	4.15	4.76	8.90	14.67	.49
Nebraska.....	5.98	4.88	10.86	17.21	.87
Colorado.....	7.68	8.41	16.09	26.14	1.06
Total.....	5.40	5.42	10.83	17.53	0.72
Spring wheat region:					
Minnesota.....	6.41	4.56	10.97	15.95	.28
North Dakota.....	10.36	7.05	17.41	33.13	.60
South Dakota.....	7.77	8.02	15.79	23.71	.52
Montana.....	16.78	11.53	28.30	33.37	.22
Wyoming.....	5.89	7.65	13.54	37.33	2.05
Total.....	8.87	6.78	15.66	23.98	0.45
Dairy region:					
Wisconsin.....	3.37	4.68	8.05	10.32	.19
Michigan.....	3.52	6.11	9.63	13.51	.19
Total.....	3.45	5.41	8.85	11.94	0.19

* Wallace, H. C., The Wheat Situation; a Report to the President, p. 103, 1923.

Mountain States.⁵ The percentage of tenants who lost their property was materially higher.

How many have lost or will lose their life-time savings is unknown. The writers' guess is that this number will exceed a million.

TABLE XX

BANKRUPTCY CASES OF FARMERS, AVERAGE 1911-1913, ANNUAL 1919-1921, YEARS BEGINNING JULY 1 *

(Annual Reports of the Attorney General.)

State or Region	Average, 1911-1913		1919		1920		1921		1922	
	Num- ber	Per Cent of All Cases	Num- ber	Per Cent of All Cases	Num- ber	Per Cent of All Cases	Num- ber	Per Cent of All Cases	Num- ber	Per Cent of All Cases
United States.....	941	5.5	997	6.4	1363	9.0	3236	14.4	5940	17.4
Corn belt:										
Ohio.....	26	3.1	18	3.0	23	5.0	64	9.4	156	12.2
Indiana.....	18	6.4	12	8.7	16	12.9	59	24.1	84	25.2
Illinois.....	33	2.5	29	2.7	11	1.6	81	8.0	192	11.2
Iowa.....	70	21.5	36	18.6	75	27.3	368	52.3	489	52.3
Missouri.....	12	2.6	25	4.9	22	7.3	61	15.1	105	18.8
Total.....	159	4.9	120	4.7	147	7.9	633	20.8	1026	21.3
Western winter wheat region:										
Kansas.....	17	8.1	31	19.6	45	21.3	113	34.5	225	38.3
Nebraska.....	14	1.1	11	9.3	8	9.3	60	32.6	132	51.0
Oklahoma.....	19	6.2	13	9.4	13	10.2	38	15.8	81	14.7
Texas.....	34	7.6	57	24.2	82	21.4	122	19.4	253	20.9
Colorado.....	24	9.0	18	12.8	48	22.6	77	30.9	118	32.2
Total.....	108	8.0	130	16.4	196	19.2	410	25.2	809	27.2
Spring wheat region:										
Minnesota.....	30	7.1	42	7.9	57	11.9	189	29.0	291	28.5
North Dakota.....	84	52.2	50	38.5	93	63.7	237	78.5	615	82.1
South Dakota.....	29	29.6	18	13.7	24	31.6	38	52.1	148	63.8
Montana.....	38	25.7	63	35.4	82	36.3	215	59.2	366	59.9
Total.....	181	21.9	173	17.8	256	27.6	679	48.9	1420	54.3
Pacific Northwest:										
Idaho.....	10	18.5	12	14.0	19	23.8	79	46.7	160	54.8
Washington.....	25	7.5	20	6.7	29	11.1	49	13.0	131	18.0
Oregon.....	20	7.0	7	3.4	11	2.7	33	8.9	110	15.3
Total.....	55	8.2	39	6.6	59	7.9	161	17.6	401	23.1

* Wallace, H. C., The Wheat Situation, a Report to the President, p. 104, 1923.

⁵ Wallace, H. C., Annual Report of the Secretary of Agriculture, U. S. D. A., p. 9 (1923). Idem, The Wheat Situation: a Report to the President, p. 35 (1923).

Some of these have left the farms, some have gone back to work as hired men, but many are continuing as farm operators, with debts exceeding their resources. Some of these last will recover, but many will go on struggling against impossible odds.

The persons who have lost their property are largely energetic men who have worked hard, and by years of close economy have saved enough to make a part payment on equipment or on a farm. Nearly all of them are married and will find it difficult to get a new start, because they are at the age when the family expenses are high.

Before the war farm bankruptcies represented about 5 per cent of all bankruptcies in the United States. In 1922 they represented 17 per cent of the total number. For the corn belt, the pre-war percentage was 5, and in 1922 it was 21. For the western winter wheat region the pre-war percentage was 8, and in 1922 it was 27. In the spring wheat region, farm bankruptcies formerly represented 22 per cent of the total, and in 1922 were 54 per cent.⁶ For each of these regions 1922 was worse than 1921.

Bank failures in agricultural districts.—Over 44 per cent of the banks that failed from 1902 to 1923 inclusive, failed during the four years of the agricultural depression. During the eighteen years, 1902 to 1919, only 183 national banks failed. The panics of 1903, 1907, and 1914 are included in this period. The number of failures during the four years of the agricultural panic was 161, or approximately equal to the number that failed during the first two decades of the twentieth century. Some persons attribute the failure of banks in the agricultural districts to poor banking and to too many banks in the farming regions. No doubt, a few banks did fail for these reasons. But the primary cause of the large number of failures was financial inflation and deflation.

The rapid turnover of business in the city makes it possible for readjustment to take place in one or two years. The slow turnover of agriculture requires that the readjustment cover many years. The effect of this is well illustrated when one compares the bank failures in industrial sections with those in agricultural sections. Of the 430 state and national banks that failed between June 30, 1923, and January 1, 1924, there were no failures in the New England and Middle Atlantic states and but three failed in the East North Central states. The major portion of our industrial production

⁶ Wallace, H. C., *The Wheat Situation; a Report to the President*, p. 104, 1923.

takes place in this region. In the West North Central states, 241 state and national banks failed during the seven months ending with January 31, 1924. This represented over one-half of the entire bank failures in the United States. Most of the remainder of the bank failures occurred in the mountain states and in the West South Central states.

TABLE XXI

BANK SUSPENSIONS IN THE UNITED STATES *

Year Ending June 30	Number	Total Liabilities
1918	20	\$5,000,000
1919	50	17,000,000
1920	119	51,000,000
1921	404	173,000,000
1922	277	78,000,000
1923	578	204,000,000
Total	1448	\$527,000,000

* The McNary-Haugen Bill, 68th Cong., 1st Sess., House of Rep., Rept. 631, p. 16, May 2, 1924.

TABLE XXII

NUMBER OF STATE AND NATIONAL BANK FAILURES IN THE UNITED STATES, 1920-1924

Year Ending June 30	Industrial States: New England, Middle Atlantic, East North Central		Agricultural States: West North Central, South Atlantic, East South Central, West South Central, Mountain, Pacific	
	Number Failures	Per Cent of Banks	Number Failures	Per Cent of Banks
1920	15	0.2	34	0.2
1921	38	0.5	320	1.7
1922	28	0.4	368	2.0
1923	19	0.2	255	1.4

CHAPTER VII

FREIGHT RATES

History of freight rates.¹—For several years just prior to the war, freight rates had been maintained at a fairly constant level. In 1914 the Interstate Commerce Commission granted an increase of 5 per cent on practically all rates north of the Ohio and Potomac rivers and east of the Mississippi River. In 1917, rates in the same

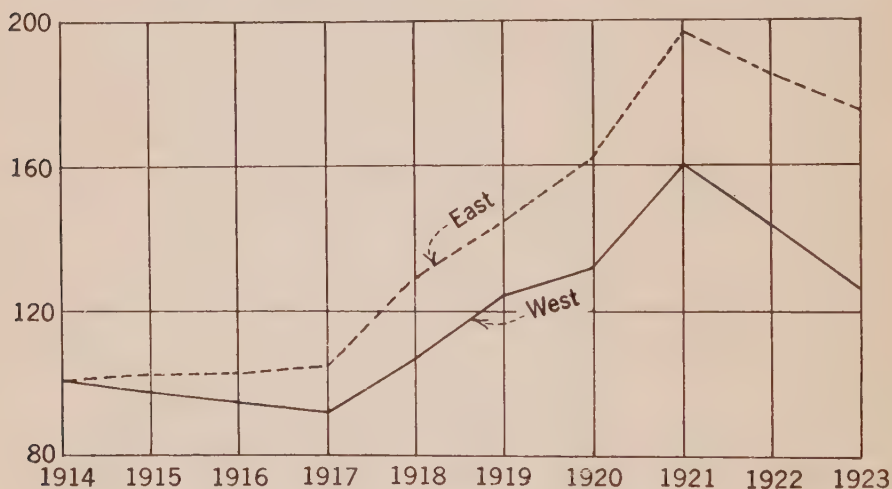


FIG. 19.—Index numbers of railway revenue, per ton mile, in the East and in the West. Revenue in the East, in 1923, was 76 per cent above pre-war. It has been much higher in the East than in the West.

area were increased approximately 15 per cent. On June 25, 1918, the Federal Railroad Administration advanced rates 25 per cent over the entire United States. On August 26, 1920, the most radical adjustment in history was made. In the northeastern states, rates were increased 40 per cent; in the west, 35 per cent; in the far west and in the south, 25 per cent, while on freight moving between the various sections, the advance was $33\frac{1}{3}$ per cent.

¹ Gabriel, H. S., Freight Rates, Farm Economics, No. 11, p. 103, Feb., 1924.

In addition to the increases just mentioned, there were two other important freight-rate changes. These were the two 10-per cent decreases of 1922, one of which was on agricultural products and the other on non-agricultural products. While these percentage changes do not give a complete picture of all freight-rate changes, they do give a general idea of the comparative status of freight rates at any given time. Throughout the entire period minor rate adjustments have been made. Because of these minor readjustments, most of which were reductions, the average rates are less than the sum of the percentage changes indicate. Calculations of index numbers from actual freight rates on a limited number of commodities confirm this conclusion.

TABLE XXIII

MAJOR CHANGES IN FREIGHT RATES FOR DIFFERENT SECTIONS OF THE UNITED STATES
FOR SHIPMENTS BETWEEN POINTS WITHIN THE REGION
1913 = 100

Date	Northeast	West	Far West	South
January 1, 1913.....	100	100	100	100
January 1, 1914.....	100	100	100	100
January 1, 1915.....	105	100	100	100
January 1, 1916.....	105	100	100	100
January 1, 1917.....	105	100	100	100
January 1, 1918.....	121	100	100	100
January 1, 1919.....	151	125	125	125
January 1, 1920.....	151	125	125	125
January 1, 1921.....	211	169	156	156
January 1, 1922*.....	211	169	156	156
January 1, 1923.....	190	152	140	140

* Rates on agricultural products were reduced 10 per cent on this date.

The average revenue received for hauling a ton of freight one mile, as reported by the Interstate Commerce Commission, furnishes another method of estimating the charges in freight rates.

Owing to the wide variations in the freight-rate levels in different sections of the country, it is difficult to construct one index number which will accurately represent the entire country. The United States Department of Agriculture, however, constructed such a number which gives a general idea of the level of freight rates

TABLE XXIV
INDEX NUMBERS OF REVENUE PER TON-MILE
1913 = 100

Date	East	West	South
1913	100	100	100
1914	100.8	100.9	99.1
1915	102.9	99.3	94.8
1916	103.5	94.6	92.3
1917	105.6	93.2	94.2
1918	129.5	106.8	112.0
1919	145.5	124.2	129.5
1920	162.4	132.4	134.9
1921	197.9	160.9	160.4
1922	186.6	146.2	146.7
1923	176.1	137.7	142.6

for the United States as a whole. They found that the index number was 159 at the end of 1922.

Adjustment of rates between different commodities.—On railroads that were properly planned, and are properly managed, freight rates must be high enough to pay the wages that are necessary to build the roads and equipment, keep them in repair, and pay the operating costs. When money is advanced to defray any of these costs, a reasonable return on this money must be made. So little study has been given to the freight-rate question, and its effect on the country, and on the railroads, that rate making has been anything but scientific. The proportion of the revenue that should be derived from freight on the farmer's wheat and from freight on his shoes is not known. It is, however, certain that if the freight rates are to be changed, the changes should not be on a flat percentage basis. If freight rates on fertilizers and pianos are in proper adjustment, it is practically certain that they will be thrown out of adjustment by raising each of them 50 per cent. Many products are too bulky and cheap to stand such increases.

Maladjustment of freight rates and prices.—Probably the ratio of freight rates to corn prices was somewhere near normal in 1914. When enough corn was shipped from Culbertson, Nebraska, to Chicago, Illinois, to purchase four standard farm implements, the freight involved aggregated \$178.27, or 293 bushels of corn at the prevailing prices. By 1919 corn had risen in price, but freight rates

were held down. The price of corn was \$1.75 per bushel, and the freight on the quantity necessary to buy the implements amounted to \$187.20, or 107 bushels of corn. Manifestly the farmers could buy many more implements or other things.

On August 1, 1914, the price of corn at Chicago was 77 cents; and on October 15, 1921, it was 46.5 cents. The freight rate from Culbertson to Chicago had practically doubled by 1921. This rate, with a few cents of other costs, reduced the price at Culbertson to

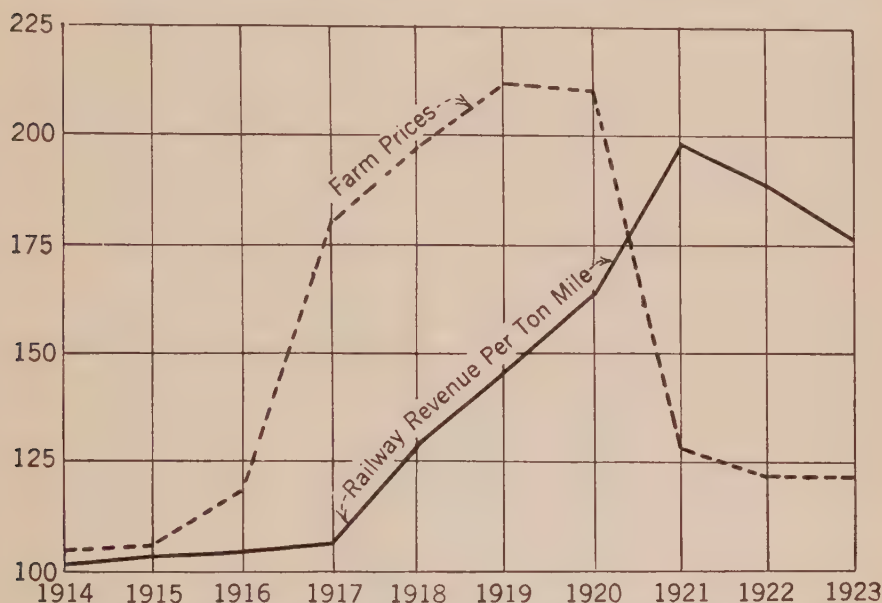


FIG. 20.—Index numbers of railway revenue in the East, and prices paid to farmers for food products. Prices rose when freight rates were held down, and this stimulated agriculture. Freights were increased when prices fell, and this further depressed agriculture. For three years, revenue per ton averaged 87 per cent above pre-war and farm prices of food products averaged only 24 per cent above pre-war.

17.5 cents per bushel. To make the purchase, the farmer had to sell nine times as many bushels of corn in 1921 as in 1919. With very high freight rates and very low prices for corn, it required many dollars and many more bushels of corn to pay the freight involved in the exchange of corn for implements. In October, 1921, it required about seven times as many dollars and seventy times as much corn as in 1919 to pay the freight on the same implements. Under such circumstances, it is easy to realize why farmers stopped buying in 1921.

TABLE XXV

FREIGHT INVOLVED IN THE PURCHASE OF FOUR TYPICAL FARM IMPLEMENTS *

Items	Culbertson, Nebraska		
	August 1, 1914	August 1, 1919	October 15, 1921
Cost to farmers of four implements. . .	\$485.00	\$840.00	\$738.00
Price of corn.....	0.609	1.754	0.175
Number of bushels of corn required to purchase four implements.....	797	479	4214
Freight on raw material.....	\$32.85	\$48.66	\$65.60
Freight on implement.....	35.54	45.82	61.91
Freight on corn.....	109.88	92.72	1105.80
Total freight involved in purchase...	178.27	187.20	1233.31

* Transportation Report of Joint Commission of Agricultural Inquiry, 67th Cong., First Sess., House of Rep., 408, Part III, pp. 156-169, 1922.

Prices of the same products in different states.—Average prices for four farm products, corn, oats, wheat, and hay, are shown in Table XXVI. Before the war, prices of these farm products in New England were lower than they were from 1866 to 1875. In New York, Pennsylvania, and Ohio they were about the same as in the period 1866 to 1875. In three Middle Western states, Illinois,

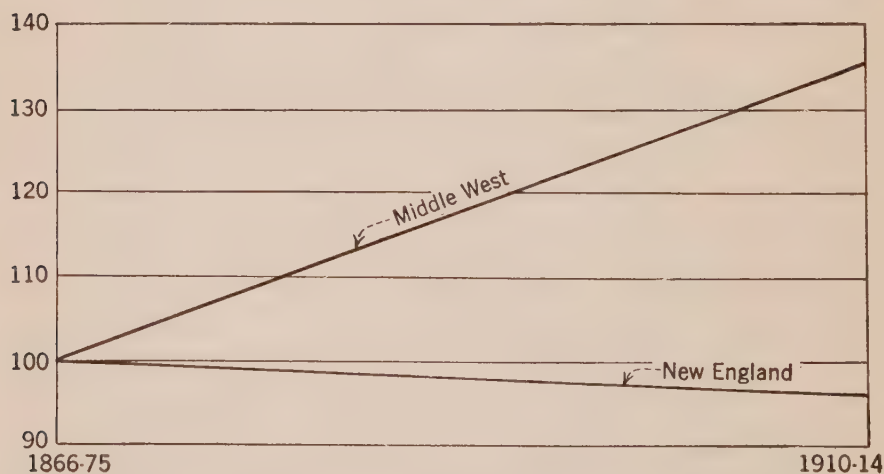


FIG. 21.—Fall in prices in New England and rise in prices in the Middle West from the period of 1866-75 to the period of 1910-14. Owing to reduced freight rates, prices rose in the Middle West and fell in New England.

Iowa, and Nebraska, prices for these products, from 1910 to 1914, were 35 per cent higher than they averaged from 1866 to 1875.

These striking differences were brought about by reduced freight rates and improved facilities for marketing. They account for the great prosperity of agriculture in the Middle West and the less prosperous condition in the East. During the three high-priced years, 1917 to 1919, freight rates were held down and prices in the Middle Western states rose 105 per cent above the pre-war price. In the New England states, they rose only 84 per cent. This again explains the greater prosperity of farmers in the Middle West during this period.

Freight rates were raised at about the time that the agricultural

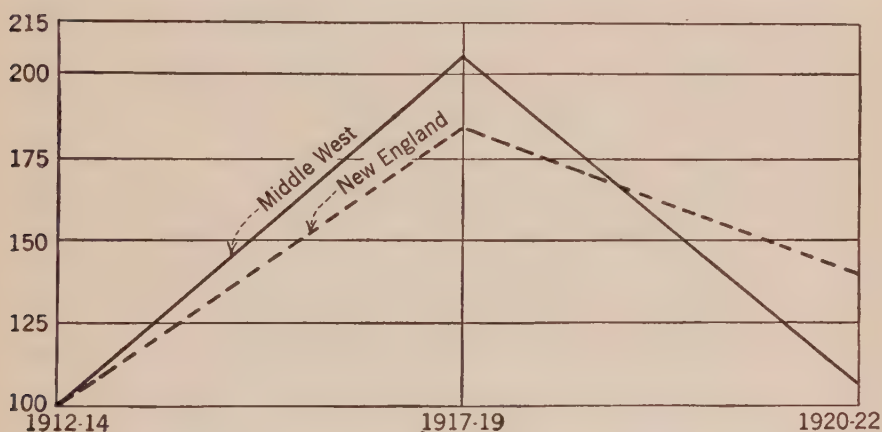


FIG. 22.—Course of prices in New England and in the Middle West during the World War period. When freight rates were held down, prices in the Middle West rose more than in New England. When freight rates were raised and deflation occurred, prices in the Middle West fell more than in the East.

panic began. For the three panic years, 1920 to 1922, prices of these farm products in the New England states were 40 per cent above the pre-war level, but in the Middle Western states they were only 7 per cent above pre-war. These facts all combined to make the agricultural panic especially severe in the Middle West. Many years of rising prices led to great optimism. The very high prices during the war added to this optimistic feeling and brought on the land boom. The agricultural panic was worst in regions where the land boom was greatest. Farmers have been criticized for bringing on the agricultural panic. It was, however, due to forces

beyond their control. It was the inevitable result of inflation and low freight rates followed by deflation and high freight rates.

TABLE XXVI

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR CORN, OATS, WHEAT, AND HAY
ON DECEMBER 1

Region	Percentage that the 1910-14 Price is of the 1866-75 Price	Percentage that the 1917-19 Price is of the 1910-14 Price	Percentage that the 1920-22 Price is of the 1910-14 Price
Maine Vermont New Hampshire	96	184	140
New York Pennsylvania Ohio	100	190	118
Illinois Iowa Nebraska	135	205	107
California Nevada Colorado	78	192	125

Prices on the Pacific Coast, from 1866 to 1875, were very high, much higher than in other sections. As the country developed, prices fell more rapidly there than in the rest of the United States. During the World War they did not rise so high in this region as in the interior of the country, nor did they fall so severely after the war was over.

Farm prices in different provinces of Canada.—Prices in western Canada rose very high during the World War. In Manitoba prices rose to an index of 268, but were only 212 on Prince Edward Island. When prices fell, the decline was most severe in the western provinces. In 1923 farm prices in Saskatchewan were only 83 per cent of pre-war.

TABLE XXVII

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR FARM CROPS IN CANADA *
1910-14 = 100

Year	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Mani- toba	Saskatch- ewan	Alberta	British Columbia	Canada
1909	86	91	98	88	97	103	96	90	.....	96
1910	89	83	90	86	93	101	96	109	104	92
1911	104	99	98	99	108	93	84	93	103	96
1912	100	103	101	91	93	87	70	80	91	87
1913	97	100	96	103	94	88	79	85	100	92
1914	110	116	115	121	112	132	172	133	102	133
1915	118	111	135	127	104	114	112	118	82	114
1916	112	118	143	131	136	157	157	175	108	148
1917	187	104	217	206	166	243	228	228	132	210
1918	173	183	191	139	179	236	236	251	178	211
1919	212	199	206	194	199	268	267	276	205	234
1920	189	245	222	221	168	212	177	192	196	190
1921	196	177	200	208	144	109	92	98	135	137
1922	107	128	133	128	100	100	103	111	136	108
1923	111	117	125	111	102	89	83	89	118	93

* Index Numbers of Agricultural Prices, Dominion Bur. of Stat., Mon. Bull. of Agri. Stat., Vol. XIV, No. 154, p. 249, June, 1921, and Vol. XV, No. 163, p. 92, March, 1922, and Vol. XVI, No. 175, p. 95, March, 1923.

The index number is calculated on a 1909 to 1913 base. To convert to the 1910-14 base, multiply the data on the 1909-1913 base for Prince Edward Island by 0.941; Nova Scotia, 0.945; New Brunswick, 0.970; Quebec, 0.994; Ontario, 0.967; Manitoba, 0.922; Saskatchewan, 0.811; Alberta, 0.873; British Columbia, 0.990; and Canada, 0.927.

CHAPTER VIII

PRICES OF FARM PRODUCTS IN THE UNITED STATES

Prices paid to farmers.—When prices are rising rapidly the percentage increase in prices paid to farmers is greater than the increase in prices at wholesale or retail. When prices are falling rapidly the percentage of decline in prices paid to farmers is greater.

For this reason the course of either wholesale or retail prices does not show the condition on farms. The use of index numbers of the prices of farm products as published by the Bureau of Labor Statistics of the United States Department of Labor to show farm

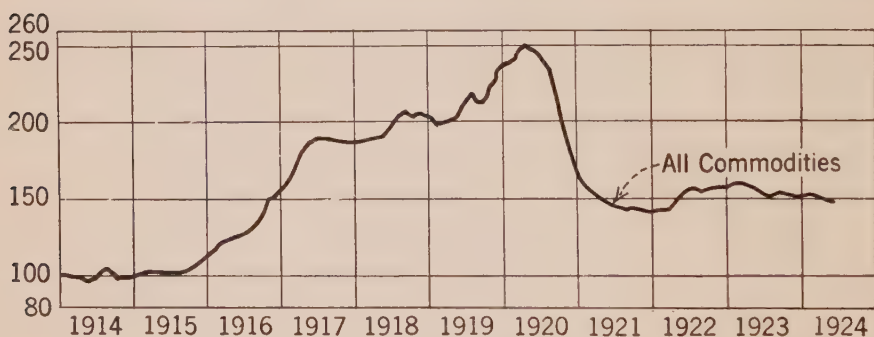


FIG. 23.—Wholesale prices of all commodities, as reported by the Bureau of Labor Statistics. This index number is used as the basis for making comparisons with individual farm products.

conditions is entirely misleading, because these are prices in cities. This subject is discussed fully in Chapter IX.

The farmer is not directly concerned with wholesale and retail prices in cities. His problem is the price that he gets. The average June price of No. 2 mixed corn in New York City for the five-year period from 1910 to 1914 was 71.8 cents. In 1921 it was 88 cents, or 23 per cent above the pre-war average. On Iowa farms the five-year average for June before the war was 55.4 cents, but in 1921 it was only 44 cents, or 21 per cent below the five-year average. To

use the New York City price as a measure of farm conditions would be wholly misleading. In June, 1921, the wholesale price of wheat in New York City was 74 per cent above the pre-war average, but the price on American farms averaged only 40 per cent above the pre-war price. Cotton in New York City was then 5 per cent below the pre-war average, but on American farms it averaged 23 per cent below.

TABLE XXVIII

PRICES PAID TO PRODUCERS FOR FARM PRODUCTS IN THE UNITED STATES *

Year	Corn, per Bu.	Oats, per Bu.	Wheat, per Bu.	Barley, per Bu.	Rye, per Bu.	Buck- wheat, per Bu.	Flax- seed, per Bu.	Beans, per Bu.	Broom- corn, per Ton	Cotton, per Lb.	Cotton- seed, per Ton
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Dollars	Dollars	Cents	Dollars
1910-14	64.8	39.9	88.0	61.7	72.4	73.3	168.8	2.26	97.00	12.4	20.66
1915	72.4	45.1	112.9	57.4	93.0	83.1	157.4	2.88	79.00	8.9	24.57
1916	75.7	43.6	117.3	66.0	93.2	89.6	198.6	4.25	123.00	13.5	41.15
1917	141.4	63.4	201.2	107.4	156.0	154.2	281.4	7.29	241.00	21.5	58.31
1918	150.4	76.8	203.7	124.6	178.4	177.8	358.3	6.20	234.00	29.5	66.19
1919	156.6	69.4	214.7	105.4	141.3	156.6	402.2	4.41	148.00	29.6	65.56
1920	144.2	79.7	224.1	120.2	161.1	162.8	361.5	4.08	131.00	32.1	51.73
1921	57.8	36.1	119.0	50.8	103.6	110.2	150.8	2.84	72.00	12.3	22.18
1922	58.5	35.8	103.2	50.2	74.5	89.6	205.1	3.70	126.00	18.9	35.04
1923	80.1	41.5	98.9	56.2	64.4	95.2	235.5	4.01	211.00	26.7	43.69

Year	Hay per Ton	Timothy Seed, per Bu.	Clover Seed, per Bu.	Cab- bage, per Cwt.	Onions, per Bu.	Pota- toes, per Bu.	Sweet Pota- toes, per Bu.	Pea- nuts, per Lb.	Apples, per Bu.	Chick- ens, per Lb.	Eggs, per Doz.
	Dollars	Dollars	Dollars	Dollars	Cents	Cents	Cents	Cents	Cents	Cents	Cents
1910-14	11.94	3.71	9.08	1.88	112	69.6	87.6	4.83	94.8	11.5	21.6
1915	10.57	2.70	8.65	1.57	95	52.5	82.2	4.5	73.3	11.9	22.0
1916	10.54	2.84	9.63	2.01	135	103.8	80.1	4.5	90.5	13.3	24.6
1917	13.42	3.03	10.93	4.21	271	189.9	121.0	6.5	125.5	16.7	33.8
1918	18.10	3.85	17.08	2.80	152	115.7	143.0	7.5	140.5	20.8	39.5
1919	20.61	4.65	24.35	3.40	205	139.4	156.9	7.7	185.2	23.8	43.8
1920	21.26	4.66	23.13	3.99	237	249.5	175.7	9.0	207.9	25.5	47.9
1921	12.96	2.76	10.45	2.66	154	103.8	118.7	3.8	158.1	20.9	34.0
1922	11.68	2.69	11.13	2.56	241	96.7	104.8	4.2	161.0	19.1	28.5
1923	12.29	3.01	11.42	3.02	186	84.1	104.4	6.7	133.7	18.9	30.3

Year	Butter, per Lb.	Milk Cows, per Head	Beef Cattle, per Cwt.	Veal Calves, per Cwt.	Sheep, per Cwt.	Lambs, per Cwt.	Wool, per Lb.	Hogs, per Cwt.	Horses, per Head
	Cents	Dollars	Dollars	Dollars	Dollars	Dollars	Cents	Dollars	Dollars
1910-14	25.6	49.17	5.31	6.85	4.58	5.93	17.8	7.25	141
1915	26.0	58.25	6.01	7.63	5.28	6.85	22.5	6.59	131
1916	28.2	60.95	6.48	8.33	6.31	8.19	27.6	8.20	131
1917	36.0	71.86	8.14	10.47	9.50	12.23	47.2	13.59	133
1918	43.2	83.07	9.45	11.88	10.94	13.98	57.8	15.92	131
1919	50.7	91.96	9.72	12.74	9.59	12.98	51.0	16.23	122
1920	55.1	89.54	8.47	11.81	8.42	11.94	38.1	13.02	120
1921	38.7	59.10	5.53	7.87	4.61	7.20	16.9	7.84	93
1922	35.7	53.56	5.43	7.69	6.00	9.70	29.0	8.40	84
1923	40.9	55.43	5.59	8.01	6.62	10.51	37.7	7.13	83

* Prices are the average of the quotations for each of the twelve months as given by the United States Department of Agriculture.

Average of cotton is for August, 1909, through July, 1914.

Cottonseed is a four-year average.

Timothy seed is a four-year average.

Prices paid to producers of farm products are reported monthly by the United States Department of Agriculture. These are the only extensive quotations that show the prices received by farmers.

Average yearly prices of more important products.—For sixty months before the war, the average price paid to farmers in the United States for wheat was 88 cents. For 1920 it averaged 224 cents. The price fell to 99 cents as a yearly average for 1923.

The price for corn for the five years preceding the war was 65 cents a bushel. It rose to 157 cents in 1919 and fell to 58 cents in 1921, or was 7 cents below the pre-war average price. The unfavorable weather in 1924 so reduced the crop that the average farm price in July of that year was 98.3 cents per bushel.

Before the war, prices for cotton averaged 12.4 cents per pound.

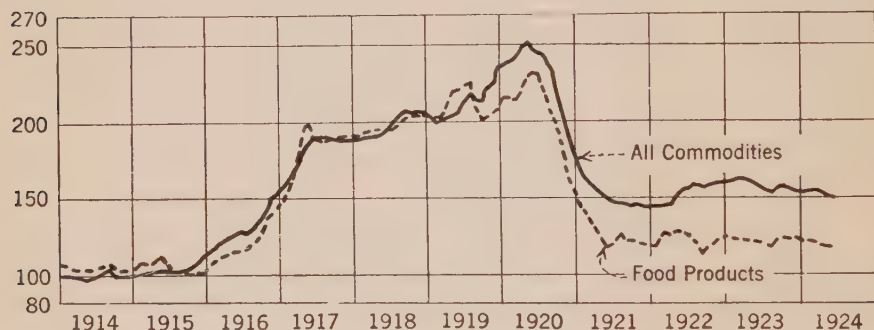


FIG. 24.—Wholesale prices of all commodities, and prices paid to farmers for food products. Food products fell more than the average for all commodities.

The yearly average for 1919 was 29.6 cents. For 1921, it was 12.3 cents, slightly below the pre-war average. Due to the ravages of the boll weevil, the prices in 1923 were more than double pre-war prices.

For five years before the war, farmers received on the average \$7.25 per hundred for hogs. The 1919 average was \$16.23. In 1923 the average was \$7.13, which was less than the pre-war average.

For the five years before the war, beef cattle in the United States sold for \$5.31 on the average. In 1923 they sold for \$5.59. For three years, 1921 to 1923, they were practically at the pre-war level.

Horses were worth \$141 per head before the war, but only \$83 in 1923.

Prices paid to farmers for food.—If one sold 700 million bushels of wheat, 170 million bushels of potatoes, 99 million bushels of apples, 1 billion dozen eggs, 9,900 million pounds of hogs, 1 billion pounds of chickens, and other food materials, as listed in the footnote to Table XXIX, he would have received the relative quantities of money listed in that table. This quantity of food materials, representing what American farmers normally sell, would have brought \$122 in 1923 for each \$100 that would have been obtained at the five-year average prices before the war, or prices in 1923 were 22 per cent above pre-war prices. Since taxes and city wages were about double what they were in the pre-war period, and since wholesale prices of all commodities were 57 per cent above pre-war, farmers had to make very drastic changes in their expenditures.

TABLE XXIX

INDEX NUMBERS OF PRICES PAID TO FARMERS FOR FOOD *

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	105	105	107	107	105	103	101	100	101	101	99	98	103
1911	99	94	90	88	88	88	90	94	93	92	94	94	92
1912	95	98	98	101	106	105	103	100	98	82	98	97	98
1913	95	97	99	100	99	101	102	101	101	104	105	106	101
1914	106	106	105	103	103	103	104	105	108	106	105	105	105
1915	106	110	109	107	112	110	105	104	100	102	102	101	106
1916	105	110	111	112	115	116	116	118	125	127	138	143	120
1917	142	152	165	173	198	199	190	189	187	189	189	189	180
1918	188	191	194	193	196	193	196	202	203	204	204	205	197
1919	206	201	198	209	221	220	223	225	207	200	205	206	210
1920	215	216	213	218	229	232	230	215	202	195	181	160	209
1921	152	145	140	128	122	118	119	127	122	123	122	120	128
1922	119	119	128	125	129	129	126	120	113	117	120	124	122
1923	126	123	123	122	124	121	120	118	122	123	122	123	122
1924	121	122	119	118	118	119	124	132	129				

* Calculated from prices published by the U. S. Dept. of Agri. An aggregative average based on the following quantities, all expressed in millions: corn, 150 bushels; oats, 70 bushels; wheat, 700 bushels; barley, 30 bushels; rye, 60 bushels; buckwheat, 11 bushels; beans, 9 bushels; cabbage, 6.4 hundredweight; onions, 10 bushels; potatoes, 170 bushels; sweet potatoes, 60 bushels; peanuts, 40 pounds; apples, 99 bushels; chickens, 1000 pounds; eggs, 1000 dozen; butter, 2300 pounds (this amount represents all dairy products); beef cattle, 117 hundredweight; veal calves, 10 hundredweight; sheep, 10 hundredweight; lambs, 4 hundredweight; hogs, 99 hundredweight. These quantities were arrived at by study of the Censuses of Agriculture and Manufactures for 1919 and the Yearbooks of the Department of Agriculture. They approximately represent 1919, but vary from it if the yield of that year was abnormal. The prices used are those published by the Department of Agriculture.

In June, 1920, prices paid to farmers for food were 132 per cent above the pre-war level, but by May of the following year they were only 22 per cent above pre-war. They were practically stabilized at that level for three years. The short world crop of wheat and the short American crop of corn will make some improvement in average prices in the fall of 1924.

Prices of all farm products.—The principal product other than food sold by farmers is cotton. With the full employment at high wages that came in 1922 and 1923, the demand for cotton was very high. At the same time the supply was greatly reduced by the ravages of the boll weevil. The rise in the price of cotton increased

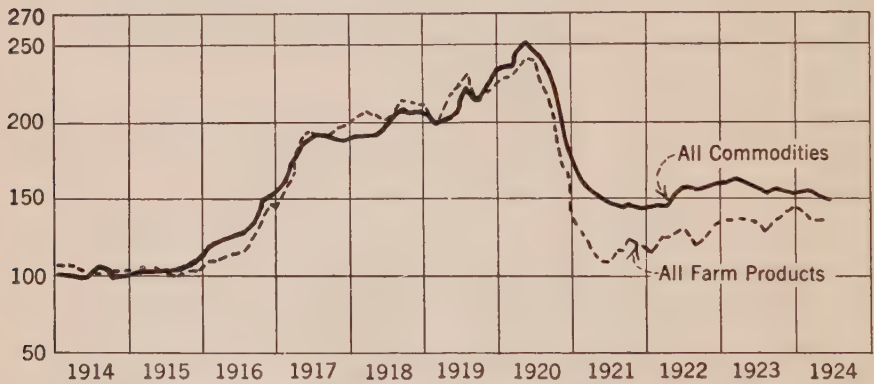


FIG. 25.—Index numbers of prices paid to farmers for all farm products and of prices for all commodities.

the index numbers of prices of all farm products in 1923 to such an extent that it was believed by many that the agricultural depression was over, just as the short corn and wheat crops were hailed in 1924 as ending the depression. The index numbers of prices of all farm products sold by farmers are given in Table XXX.

The great drop in prices.—In June, 1920, the index of prices paid to farmers for farm products stood at 241. The number of points that the index declined in each month of the ensuing panic was as follows:

1920 July.....	2	1921 January.....	9
August.....	15	February.....	6
September.....	19	March.....	6
October.....	13	April.....	10
November.....	20	May.....	6
December.....	25	June.....	2

TABLE XXX

INDEX NUMBERS OF PRICES PAID TO FARMERS FOR ALL FARM PRODUCTS *

Corresponding Months of 1910-14 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	107	107	108	108	105	104	102	102	103	102	102	100	104
1911	101	97	94	92	92	92	95	97	94	92	92	93	94
1912	93	96	97	100	105	104	102	101	97	98	97	97	99
1913	95	96	97	97	97	98	99	98	100	104	105	105	99
1914	104	104	104	102	102	102	103	103	101	98	96	96	101
1915	98	103	102	101	105	103	99	99	96	101	102	101	101
1916	104	109	108	110	112	113	114	115	124	128	140	146	119
1917	142	150	158	168	189	192	191	193	189	192	196	196	180
1918	198	202	205	206	203	198	202	205	213	214	211	209	206
1919	211	202	197	207	218	221	225	231	215	210	219	220	215
1920	227	228	226	231	240	241	239	224	205	192	172	147	214
1921	138	132	126	116	110	108	108	115	115	124	121	118	119
1922	117	116	124	123	126	129	129	125	119	122	129	134	124
1923	137	136	138	139	138	134	134	129	133	138	141	143	137
1924	143	142	136	135	135	134	138	146	137				

* An aggregative average based on the weights given in footnote to Table XXIX, except for the following: corn, 461 bushels; oats, 277 bushels; barley, 45 bushels; flaxseed, 8 bushels; broom-corn, 0.04 tons cotton, 5688 pounds; cottonseed, 5.328 tons; hay, 13.137 tons; wool, 236 pounds; horses, 0.521 head.

This drop in prices was much greater than the drop that occurred after the War of 1812 or after the Civil War. The decline in five months, August to December inclusive, was from 239 to 147. In a year prices declined from 241 to 108.

Prices of all commodities.—The Bureau of Labor Statistics publishes an index number including over 400 commodities that represent the commerce of the Nation. This index number is used as a base for making comparisons of price movements of individual commodities. For convenience this index number is marked "all commodities" in the illustrations. The index number was originally published with 1913 as 100, but in this book the five years 1910 to 1914 are always considered 100 if the available data make this possible. Cycles of high and low prices of individual farm products often last several years, so that a base at least five years long is desirable.

When the five-year average before the war is taken as 100, prices for the year 1915 are represented by 103. Prices rose rapidly until the summer of 1918, and in September they stood at 208. With

TABLE XXXI

WHOLESALE PRICES OF "ALL COMMODITIES" IN THE UNITED STATES, BY MONTHS *

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1900	84	84	85	85	84	83	82	82	82	82	82	82	83
1901	81	81	81	80	80	80	80	81	82	82	82	82	81
1902	84	84	84	85	86	86	86	87	86	88	87	88	86
1903	90	90	90	89	88	88	87	87	88	87	87	87	88
1904	88	89	89	89	88	88	87	87	87	87	88	88	88
1905	87	87	86	87	86	87	87	88	89	89	90	91	88
1906	90	90	90	90	90	90	97	91	91	92	93	95	91
1907	95	96	96	96	96	96	97	97	97	97	96	94	96
1908	94	93	93	93	92	91	91	91	91	91	91	93	92
1909	97	97	97	98	98	98	99	99	100	101	102	103	99
1910	104	104	105	104	103	103	102	102	103	102	102	102	103
1911	95	95	95	95	94	94	95	95	95	95	95	95	95
1912	99	99	100	102	102	101	102	101	102	102	102	102	101
1913	102	102	102	102	101	101	102	102	104	103	102	101	102
1914	100	101	100	100	99	99	99	103	104	99	99	99	100
1915	100	101	101	101	102	101	102	102	102	104	106	110	103
1916	115	117	121	123	124	126	126	129	133	139	149	152	130
1917	156	160	165	177	187	189	192	193	191	187	187	186	181
1918	188	190	191	194	194	195	200	204	208	206	207	206	198
1919	203	197	200	203	206	207	216	220	214	215	221	228	210
1920	238	237	239	250	252	248	246	236	231	215	200	183	231
1921	173	163	158	151	148	145	144	145	144	145	144	143	150
1922	141	144	145	146	151	153	158	158	156	157	159	159	152
1923	159	160	162	162	159	156	154	153	157	156	155	154	157
1924	154	155	153	151	150	148	150	153	152				

* Monthly prices before 1913 are not given by the U. S. Bur. of Lab. Stat. on the new basis. Prices here included bear the same ratio to the new yearly prices that the old monthly prices bore to the old yearly prices. The data as published are on a 1913 base. To convert to the 1910-14 base, divide by 0.98.

the close of the war, they started to decline and reached 197 in February, 1919. A secondary rise then began which reached a peak of 252 in May, 1920. Rapid deflation then occurred. Prices fell from 252 in May, 1920, to 141 in January, 1922.

Purchasing power of farm products.—The farmer does innumerable things with his income. He pays wages, taxes, interest, debts, and buys machinery, fertilizer, farm supplies, food, clothing, and many other things. He is not concerned primarily with how many dollars he gets for his products, but is concerned with how much farm produce it takes to meet his necessary expenditures.

In 1923 wages of city labor were more than double pre-war wages, whereas food as sold by farmers was 22 per cent above pre-war prices. A farmer who wished to hire city labor had to sell almost twice as much farm produce as formerly in order to pay the bill. For hiring farm labor at the average price for the United States it took a third more farm products than before the war.

In 1923 taxes on farm property were more than double the pre-war amount. Hogs, beef cattle, and wheat were close to pre-war prices. To pay the tax bill required twice as many bushels of wheat, twice as many hogs or twice as many steers as were required before the war.

In 1923 the retail prices of food in the United States were 51 per cent above pre-war and food as sold by farmers was 22 per cent above pre-war. The food that the farmers sold would buy only 81 per cent of the normal amount of groceries.

Food products sold by farmers in exchange for all kinds of commodities had a purchasing power of 78 in 1923, which was the lowest average up to that time.

Purchasing power of farm products in terms of all commodities.—In April, 1924, the average farm price of wheat in the United States was 96 cents per bushel. This was only 8 per cent above pre-war. Prices of all commodities were 51 per cent above pre-war. In terms of all commodities, wheat therefore had a purchasing power of 72 ($108 \div 151 = .72$). Hogs sold by farmers brought \$6.70 per hundred, which was only 88 per cent of the pre-war price. Hogs therefore had a purchasing power of 58. Butter was worth 40 cents, or

TABLE XXXII
PURCHASING POWER OF FARM PRODUCTS *

Year	Food Products	Cotton	All Farm Products	Year	Food Products	Cotton	All Farm Products
1910	100	111	101	1917	99	96	99
1911	97	107	99	1918	99	120	104
1912	97	84	98	1919	100	114	102
1913	99	95	97	1920	90	112	93
1914	105	85	101	1921	85	67	79
1915	103	70	98	1922	80	100	82
1916	92	84	92	1923	78	137	87

* Prices in Tables XXVIII, XXIX, and XXX divided by Table XXXI

59 per cent above the pre-war price. It therefore had a purchasing power of 105. Calculated in the same manner, the purchasing power of beef cattle in 1924 was 70; cotton, 153; horses, 34; potatoes, 89; eggs, 74.

Prices of non-agricultural products.—The wholesale prices of all kinds of products as given in Table XXXI include farm products and foods. When farm products are out of line with other products, they influence the general price level. Omitting food and farm products, the price level is as given in Table XXXIII.

Most of the farm products and foods included by the Bureau of Labor Statistics are those produced by American farmers, but some are imported articles. The comparison between farm products and other commodities is better shown by comparing farm products with non-agricultural products than by comparing farm products with all commodities, since the latter includes farm products. If farm products are higher or lower than all commodities, the comparison with all commodities shows less difference than actually exists.

TABLE XXXIII

INDEX NUMBERS OF WHOLESALE PRICES OF NON-AGRICULTURAL PRODUCTS,
U. S. BUREAU OF LABOR STATISTICS*

1910-14 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1913	105	105	105	105	104	102	103	102	104	102	100	99	103
1914	97	99	99	101	99	98	96	97	99	93	93	94	97
1915	94	95	96	97	98	99	99	101	103	103	106	113	100
1916	120	124	130	132	133	136	133	132	136	141	153	161	136
1917	165	168	172	177	186	193	200	196	191	177	175	175	181
1918	177	180	185	189	192	193	197	198	200	198	198	194	192
1919	190	187	186	186	188	197	204	210	211	212	216	222	201
1920	234	241	247	258	258	254	254	249	247	235	216	203	241
1921	194	184	176	171	167	163	157	155	154	157	157	157	166
1922	155	154	155	158	166	169	177	181	175	174	174	173	168
1923	175	177	180	181	177	173	170	168	169	166	165	163	172
1924	165	167	166	164	162	160	169						

* The data as published are on a 1913 base. To convert to the 1910-14 base from the 1913 base, divide by 97 or multiply by 0.0103.

Purchasing power of food in terms of non-agricultural products.—Prices for food products as sold by American farmers are

compared with prices of non-agricultural products in Table XXXIV. In 1919 food sold by American farmers would buy 4 per cent more non-agricultural products than it would have bought during the five years 1910 to 1914. Its purchasing power then dropped rapidly, and for the year 1921 food products sold by farmers had a purchasing power of only 71. In April, 1924, it still remained at approximately the same level. In terms of non-agricultural products, food declined in purchasing power for the first four years of the panic period. The rise in 1924 was due to short crops of wheat and corn.

Purchasing power of all farm products in terms of non-agricultural products.—The chief non-food product sold by farmers is cotton. This crop was much higher in price in 1918 than were food

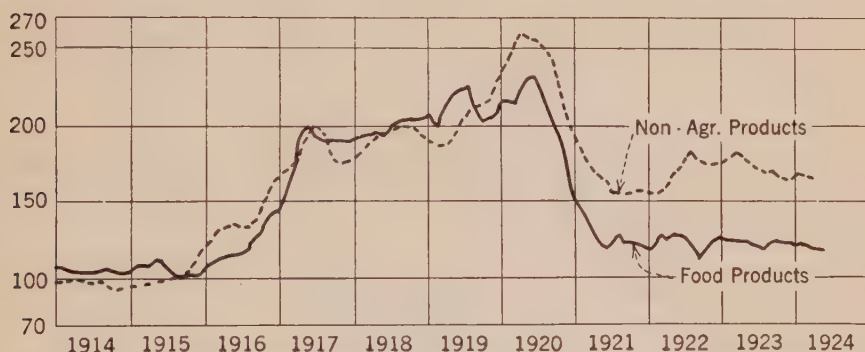


FIG. 26.—Prices paid to farmers for food products, and prices of non-agricultural commodities. Prices of food products fell much more than did prices of non-agricultural materials.

products and fell much lower in 1921. It was higher again in 1923. The index of all farm products sold by farmers is therefore a compromise between food products and cotton. When measured in terms of non-agricultural products, farm products in 1919 had a purchasing power of 7 per cent above the pre-war level. The purchasing power fell to 72 in 1921. On pages 67 to 68 the purchasing power is expressed in terms of all commodities. The purchasing power as here expressed in terms of non-agricultural products, is probably a better measure of conditions, because farmers buy very little of the group called farm products, and buy only about one-half their food supply. The major portion of their expenses are for business, and their principal purchases are non-agricultural products. The purchasing power lies between the results obtained by this method and the results obtained when the wholesale prices of all

commodities are used. The method here given is doubtless nearer to the truth.

TABLE XXXIV

PURCHASING POWER OF FARM PRODUCTS AT PRICES PAID TO FARMERS
IN TERMS OF NON-AGRICULTURAL PRODUCTS *

Year	Food Products	Cotton	All Farm Products	Year	Food Products	Cotton	All Farm Products
1913	98	94	96	1919	104	119	107
1914	108	88	104	1920	87	107	89
1915	106	72	101	1921	77	60	72
1916	88	80	88	1922	73	90	74
1917	99	96	99	1923	71	125	80
1918	103	124	107				

* Prices in tables XXVIII, XXIX and XXX divided by table XXXIII.

Snyder's index of the general price level.—Carl Snyder of the Federal Reserve Bank of New York has prepared an index of the

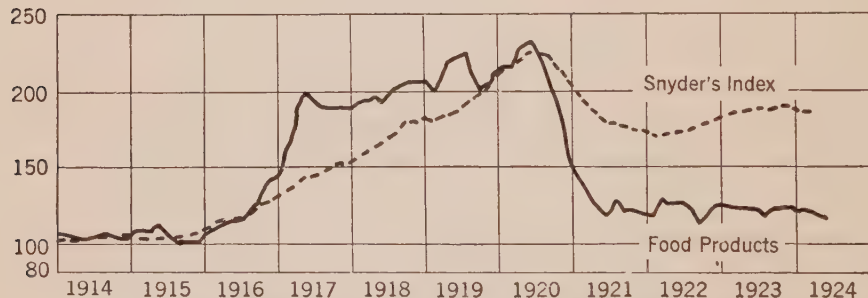


FIG. 27.—Prices paid to farmers for food, and Snyder's index of the general price level. Snyder's index includes commodities, wages, and rents. It rose less rapidly than food products and fell much less rapidly.

general price level, which is intended to represent the level at which all financial transactions are made. Commodity prices are given a weight of 20 per cent; wages, 35 per cent; cost of living, 35 per cent; and rents, 10 per cent. From 1914 to 1920, wholesale prices rose faster than wages or rents. Snyder's index therefore advanced less than wholesale prices. It rose to 223 in May, 1920, whereas wholesale prices reached a peak at 252 in that month. Since wages and rents and cost of living fell less rapidly than did whole-

sale prices, Snyder's index declined less than the United States Bureau of Labor Statistics index of wholesale prices. In March, 1924, wholesale prices stood at 153 but Snyder's index was 185.

Purchasing power of food in terms of Snyder's index.—From 1917 to 1919 food products sold by farmers had a purchasing power considerably above the pre-war average. The decline thereafter was very rapid. For the year 1923, food products sold by farmers had a purchasing power two-thirds of the pre-war amount, according to Snyder's index. This was lower than for any previous year and shows that 1923 was the worst year thus far experienced by food producers.

TABLE XXXV
SNYDER'S INDEX OF GENERAL PRICE LEVEL *

1910-14 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	98	98	98	98	97	97	98	98	98	98	98	97	98
1911	97	97	97	97	97	97	98	98	99	99	99	99	98
1912	101	101	101	101	102	101	101	101	102	102	102	102	101
1913	100	100	102	102	102	102	103	103	103	103	103	103	102
1914	102	103	102	102	101	102	103	104	104	103	103	103	103
1915	104	104	103	103	104	104	104	105	105	107	108	108	105
1916	111	111	113	114	115	116	117	118	121	123	127	129	118
1917	131	132	134	138	142	144	144	145	148	150	151	152	143
1918	154	156	158	160	162	166	169	172	178	180	179	179	167
1919	183	180	181	182	184	185	189	193	193	197	202	205	190
1920	211	211	214	219	223	223	226	222	222	217	212	205	217
1921	200	194	190	186	183	176	177	178	177	176	174	174	182
1922	170	169	170	170	171	172	173	174	176	177	179	180	173
1923	181	182	183	184	186	186	187	186	187	188	187	187	185
1924	185	185	185										

* Snyder, Carl, A New Index of the General Price Level from 1875. Amer. Stat. Assn., Vol. 19, New Series 146, p. 195, June, 1924. Converted from the 1913 base to the 1910-1914 by multiplying by 1.02.

Purchasing power of all farm products in terms of Snyder's index.—From 1917 to 1920 cotton was higher than Snyder's index. It was little more than one-half that index in 1921, but again in 1923 it was higher.

When cotton is combined with food products, the purchasing power of all farm products was lowest in 1921, when it was less than

two-thirds of the pre-war figure. All farm products including cotton in 1923 had a purchasing power of about three-fourths of the pre-war amount. The purchasing power of all farm products swung from one-fourth above pre-war in 1917 to two-thirds of the pre-war in 1921.

TABLE XXXVI

PURCHASING POWER OF FARM PRODUCTS IN TERMS OF THE SNYDER INDEX
OF THE GENERAL PRICE LEVEL *

1910-14=100

Year	Food Products	Cotton	All Farm Products	Year	Food Products	Cotton	All Farm Products
1910	105	116	106	1917	126	121	126
1911	94	104	96	1918	118	143	123
1912	97	84	98	1919	111	126	113
1913	99	95	97	1920	96	119	99
1914	102	83	98	1921	70	55	65
1915	101	69	96	1922	71	88	72
1916	102	92	101	1923	66	116	74

* Prices in Tables XXVIII, XXIX, and XXX divided by Table XXXV

Real purchasing power of farmers.—If X represents prices paid to farmers, Q quantity sold, Y wholesale prices of all commodities, Z retail prices of products that farmers buy, A taxes, B interest payments, C payments on debts, D payments for labor, insurance, etc., the purchasing power of farm products may be expressed by $X \div Y$; but the purchasing power of farmers is expressed by

$$\frac{QX - (A + B + C + D)}{Z}$$

Purchasing power per acre.—When the crop yield is abnormal, price alone does not give a true picture of the situation. This is strikingly illustrated in the price of cotton. Since the spread of the boll weevil, the yield of cotton has been greatly decreased. The price paid to farmers for cotton in December, 1923, was 31 cents per pound. The price index was 254, when pre-war is 100. The purchasing power of cotton was 165. However, the yield per acre was so much below the average that the purchasing power was only 127.

Since cotton plays so important a part in the index of all farm products, this high price of cotton misled many persons into believing that the prices of farm products were satisfactory. Even if the profits from cotton were high, it is probable that the North Dakota farmers might not be wholly satisfied, because they have not sold much cotton recently.

CHAPTER IX

FARM, WHOLESALE, AND RETAIL PRICES

Wholesale prices not a measure of farm conditions.—Wholesale prices in cities for many years are available. These data are helpful, but must be used with great care, because the course of farm prices is very different from the course of city prices. For example, the average June price of No. 2 mixed corn in New York City for the five-year period 1910–14 was 71.8 cents. In 1921 it was 88 cents, or 23 per cent above the pre-war average. On Iowa farms the five-year average for June before the war was 55.4 cents, but in 1921 it was only 44 cents, or 21 per cent below the five-year average. To use the New York City price as a measure of farm conditions would be wholly misleading. In June 1921, the wholesale price of wheat in New York City was 74 per cent above the pre-war average, but the price on American farms averaged only 40 per cent above the pre-war price. Cotton in New York City was then 5 per cent below the pre-war average, but on American farms it averaged 23 per cent below.¹

The wholesale prices of farm products as published by the Bureau of Labor Statistics are frequently used to show the situation on farms. These figures show wholesale prices in cities. To use them as a measure of farm conditions is to misuse them. Wholesale prices are the sum of farm prices plus freight, plus wages for handling, plus many other charges. When the sum of these is large or small, it is entirely unsafe to assume that the result is wholly due to any one of the factors.

A comparison of farm, wholesale, and retail prices as given in Table XXXVII shows how erroneous any conclusion would be if based on the assumption that wholesale, or retail prices represent farm conditions.

¹ Warren G. F., Prices of Farm Products in the United States, U. S. D. A. Bull. 999 (August 1921), p. 18.

TABLE XXXVII

INDEX NUMBERS OF CITY PRICES AND OF PRICES PAID TO PRODUCERS FOR
FARM PRODUCTS IN THE UNITED STATES

1910-14=100

Year	Prices Paid to Farmers for Food. (Table XXIX)	Wholesale Prices of Food in Cities *	Retail Prices of Food in Cities *	Prices Paid to Farmers for Cotton †	Prices Paid to Farmers for Farm Products. (Table XXX)	Wholesale Prices of Farm Products in Cities *	Wholesale Prices, all Com- modities. (Table XXXI)
1910	103	100	96	114	104	103	103
1911	92	96	95	102	94	93	95
1912	98	103	101	85	99	101	101
1913	101	99	103	97	99	100	102
1914	105	101	105	85	101	103	100
1915	106	104	104	72	101	104	103
1916	120	120	118	109	119	123	130
1917	180	165	151	173	180	190	181
1918	197	186	173	238	206	218	198
1919	210	205	192	239	215	231	210
1920	209	218	209	259	214	218	231
1921	128	143	158	100	119	124	150
1922	122	137	146	152	124	133	152
1923	122	143	151	215	137	142	157

* As published by the United States Bureau of Labor Statistics. These prices are given on a 1913 base. They are here converted to a five-year base.

† Calculated from prices published by the United States Department of Agriculture.

For the year 1917, when prices were rising faster than wages or freight rates, the prices paid to farmers for food products were 80 per cent above pre-war, but wholesale prices were only 65 per cent above and retail only 51 per cent above the pre-war average. But for 1923, when wholesale and retail prices had fallen more than freight and handling charges, the prices paid to farmers for food were 22 per cent above pre-war, while wholesale prices of food in cities were 42 per cent and retail 57 per cent above pre-war. Prices of perishable foods afford even more striking examples. For many of these the farm price is less than half of the city wholesale price. A drop of a little over 50 per cent in the city wholesale prices makes a drop of 100 per cent in the farm price, and the produce rots because the farmer cannot sell it for more than enough to pay the freight and city-handling charges.

The average price paid to farmers for foods remained practically stationary for three years. Apparently, so long as wages and freight rates remain at the levels of 1923, the price paid to farmers for food must remain about one-fourth above the pre-war level—unless retail prices are over a half above pre-war. Prices paid to farmers for the three years ending with June, 1923, averaged 122, and the retail prices averaged 150, when the five-year pre-war average is in each case 100.

Theoretically, this relationship may be expressed as follows: If half of the retail price goes to farmers, and half goes for freights

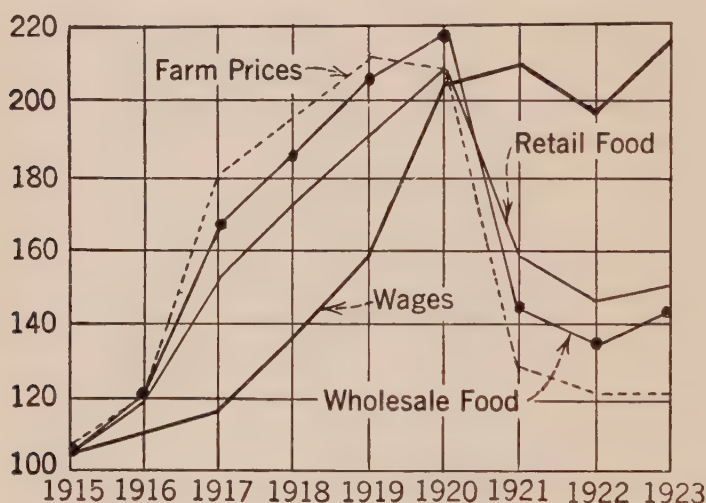


FIG. 28.—Prices paid to farmers for food, and prices of food at wholesale and retail. When prices were rising wages lagged, so that handling charges were low and prices to farmers advanced more rapidly than did retail prices. When prices fell, handling charges remained high and farm prices fell more than retail prices.

and handling charges—largely city wages—the farm price may be expressed by 50 and the freights and handling charges also by 50 when the retail price is called 100. If handling charges double, a retail price of 150 leaves the farm price unchanged. But handling charges do respond to some extent to prices paid the farmer, so that, with the retail price increased to 150, farm prices might readily be 60, or 20 per cent above pre-war—which was about the situation for the three years. When wages are low relative to prices, the prices paid to producers are high relative to retail prices. When wages are high relative to prices, the prices at retail are not so low as prices

to producers. In each case wholesale prices occupy an intermediate position.

Since there seems to be little likelihood of a material decline in any of the transportation or handling charges, the only way to improve the prices paid to farmers is to have the retail prices rise. Any rise in retail prices will be nearly all reflected to the farmer because handling charges will remain practically constant. A small percentage of increase in retail prices would, therefore, make a much higher increase in prices paid to farmers.

Farm, wholesale, and retail prices of nine products.—The index numbers for food as given above are probably the best basis for making comparison, but in order to be sure that no other factor enters into the problem, prices of nine farm products at the primary centers of production are compared with prices of products as similar as possible at wholesale and retail. The products include less of the cheaper foods so that the index numbers are higher than for all foods.

During the period of financial inflation, prices rose much faster than did freight rates or wages and a large part of the increase was transferred to farmers. In 1917 the index of prices of these nine commodities at retail was 53 per cent above the pre-war level, but the prices paid to farmers were 84 per cent above pre-war.

Financial inflation was checked in 1918, and retail prices began to catch up with farm prices. For February and March, 1919, the average of prices paid to farmers was 206, wholesale prices 200, and retail 184.

The secondary inflation of 1919 to 1920 again stimulated farm prices. When this secondary boom occurred, the opinion that prices would never fall became prevalent. Soldiers had returned and a strong demand for farm property developed. Prices of farm land, breeding stock, and tools rose strikingly. Large numbers of young men bought farms. This secondary inflation laid the foundation for the agricultural depression.

Deflation reverses the relationships. Freights and city handling charges decline relatively little or may actually rise. (The most striking increase in freight rates went into effect after deflation began.) In 1921, the retail prices of these nine commodities averaged 62 per cent above pre-war, but wholesale prices were only 45 per cent, and prices paid to farmers were only 30 per cent above pre-war.

TABLE XXXVIII
INDEX NUMBERS OF PRICES PAID TO FARMERS AND WHOLESALE AND RETAIL
PRICES OF NINE PRODUCTS *
1913 = 100

Year	Prices Paid to Farmers	Wholesale Prices in Cities	Retail Prices in Cities	Year	Prices Paid to Farmers	Wholesale Prices in Cities	Retail Prices in Cities
1913	100	100	100	1919	221	207	194
1914	105	102	102	1920	213	207	206
1915	108	104	106	1921	130	145	162
1916	123	119	114	1922	128	137	151
1917	184	173	153	1923	134	140	154
1918	205	198	178				

* Prices paid to farmers in important centers of production, as reported by the United States Department of Agriculture, except for milk. Butter, Minnesota; cattle, Nebraska; hogs, Iowa; lambs, Idaho; chickens, Iowa; milk, pool price at Utica, New York; wheat, North Dakota; corn, Illinois; eggs, Iowa.

Wholesale prices—creamery extra butter, Chicago; fresh beef carcass, good native steers, Chicago; fresh pork loins, Chicago; prime steam contract lard, New York; short clear cured pork sides, Chicago; smoked ham, Chicago; dressed lamb, Chicago; dressed fowls 48 to 56 lbs., per dozen, New York; milk delivered on platform, New York; flour, standard patents, Minneapolis; white cornmeal, Decatur, Ill.; eggs, firsts, Chicago.

Retail prices—creamery butter, Chicago; round steak, Chicago; rib roasts, Chicago; pork chops, Chicago; lard, New York; sliced bacon, Chicago; sliced ham, Chicago; leg of lamb, Chicago; hens, New York; milk, New York; flour, Minneapolis; cornmeal, Indianapolis; eggs, Chicago.

Wholesale and retail prices from reports of the United States Bureau of Labor Statistics. Where more than one product of a farm animal is included, the average for all grades is used for the product. Each of the nine products is given an equal weight in calculating these index numbers. The index numbers are calculated on the 1913 base. In the case of farm prices, seasonal variation was eliminated on the basis of 1910-1914. For wholesale and retail prices, seasonal variation was eliminated by using the three years, 1913-1915.

TABLE XXXIX
FARM, WHOLESALE, AND RETAIL PRICES OF MILK
1913 = 100

Year	Pool Price, 3.7% Milk, at Utica	Milk Delivered on the Platform at New York City	Retail Prices, New York City	Year	Pool Price, 3.7% Milk, at Utica	Milk Delivered on the Platform at New York City	Retail Prices, New York City
1913	100	100	100	1919	235	192	179
1914	104	93	100	1920	234	192	186
1915	105	94	100	1921	162	168	168
1916	115	101	102	1922	139	163	162
1917	173	143	132	1923	160	172	165
1918	211	173	161	1924*	119	141	156

* January and February.

Milk in New York.—From 1916 to 1920, index numbers of prices paid to farmers for milk were higher than wholesale prices. For the three years, 1921 to 1923, the reverse was the case. For January-February, 1924, the pool price at Utica for 3.7 per cent milk was 19 per cent above 1913 prices. Wholesale prices were 41 per cent and retail prices 56 per cent above pre-war.

Hogs and pork.—In 1917 and 1918, the index numbers of the price of hogs in Iowa were higher than the wholesale or retail prices.

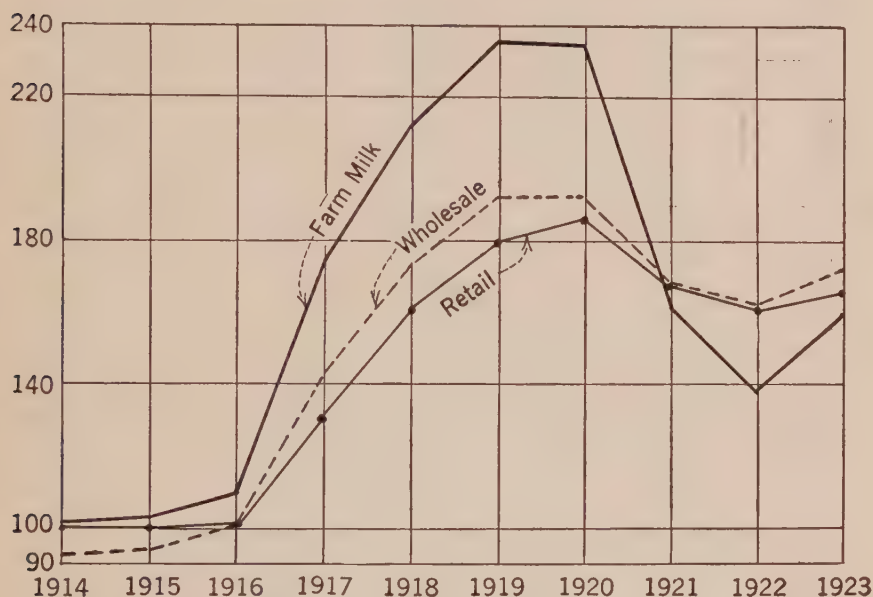


FIG. 29.—Farm price of milk at Utica, New York, and wholesale and retail prices in New York City. When prices were rising the farm price rose more than the retail price. When prices fell, farm prices fell more than retail prices.

In 1923, hogs as sold by Iowa farmers brought 10 per cent less than in 1913, but pork at wholesale was 13 per cent and at retail was 37 per cent above pre-war.

Cattle and beef.—The index number of prices of beef cattle as sold by Nebraska farmers rose more rapidly than retail prices of beef from 1916 to 1919, and rose more rapidly than wholesale prices from 1916 to 1917. For the four years, 1920–23, farm prices were low compared with wholesale and retail prices. In 1923, farmers received 2 per cent above pre-war prices, beef at wholesale was 22 per cent and at retail was 53 per cent above pre-war. Even in 1921,

when farmers sold at 8 per cent below pre-war prices, beef at retail was 54 per cent above pre-war.

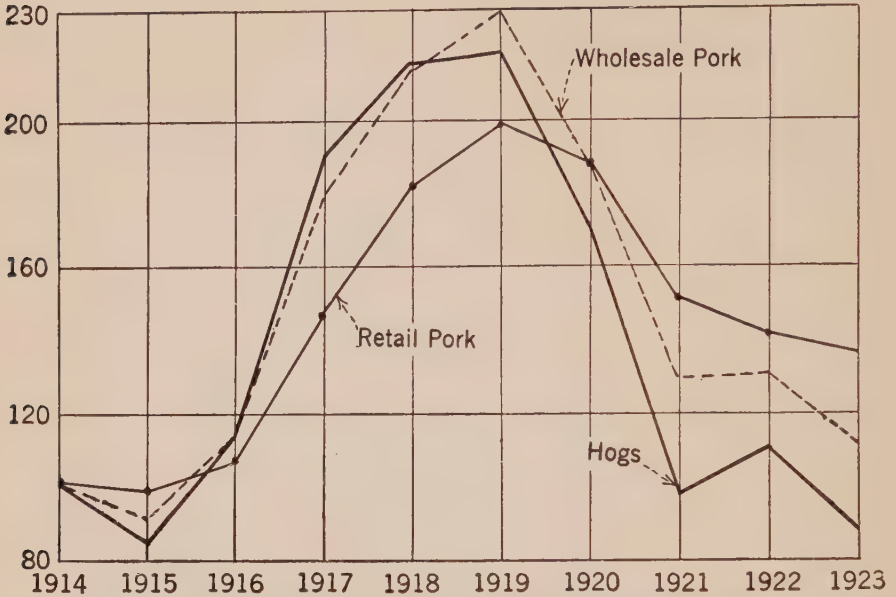


FIG. 30.—Prices paid to farmers for hogs in Iowa, and wholesale and retail prices of pork products in New York City. When retail prices rose, farm prices rose more rapidly. When prices fell, farm prices fell more rapidly.

TABLE XL
FARM, WHOLESALE, AND RETAIL PRICES OF HOGS AND PORK
1913 = 100

Year	Farm Price in Iowa	Wholesale Price Pork Loins, Sides, Smoked Hams, Chicago; Lard, New York	Retail Price Pork Chops, Bacon and Ham, Chicago; Lard, New York	Year	Farm Price in Iowa	Wholesale Price Pork Loins, Sides, Smoked Hams, Chicago; Lard, New York	Retail Price Pork Chops, Bacon and Ham, Chicago; Lard, New York
1913	100	100	100	1919	219	229	198
1914	100	101	101	1920	170	189	189
1915	85	92	99	1921	98	130	152
1916	114	115	107	1922	111	131	142
1917	190	178	147	1923	90	113	137
1918	215	213	181				

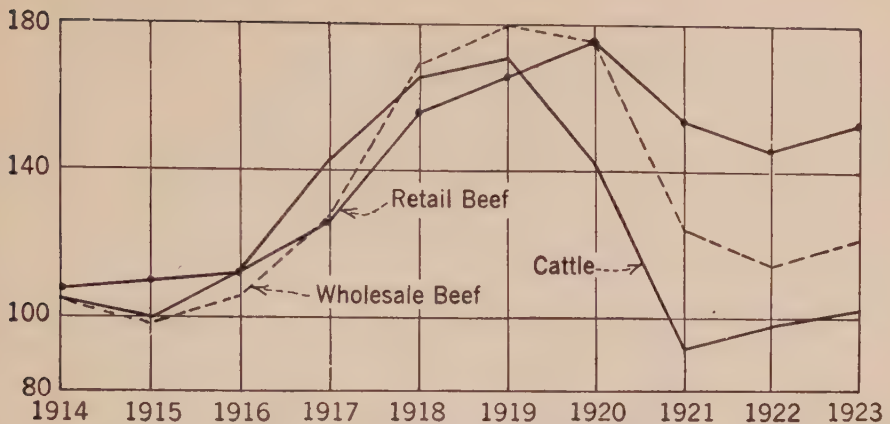


FIG. 31.—Prices paid to farmers for beef cattle in Nebraska, and wholesale and retail prices of beef in Chicago. When farm prices fell, the retail prices of beef fell very little.

TABLE XLI

FARM, WHOLESALE, AND RETAIL PRICES OF CATTLE AND BEEF

1913 = 100

Year	Farm Price Cattle in Nebraska	Wholesale Price of Beef Carcass, Chicago	Retail Price Round Steak and Rib Roast, Chicago	Year	Farm Price Cattle in Nebraska	Wholesale Price of Beef Carcass, Chicago	Retail Price Round Steak and Rib Roast, Chicago
1913	100	100	100	1919	171	179	166
1914	105	105	108	1920	143	177	176
1915	100	99	110	1921	92	125	154
1916	112	106	112	1922	97	115	146
1917	144	128	126	1923	102	122	153
1918	165	169	156				

Wheat and flour.—The same general relationship of farm, wholesale and retail prices held for wheat as for other commodities. The very poor quality of wheat in 1916 and low outturn of flour probably accounts for the apparent exception in that year when flour was higher than wheat. From 1920–23, the farm price fell from 310 to 122. Flour declined from 280 to 138, and flour at retail from 266 to 154. Bread declined very little.

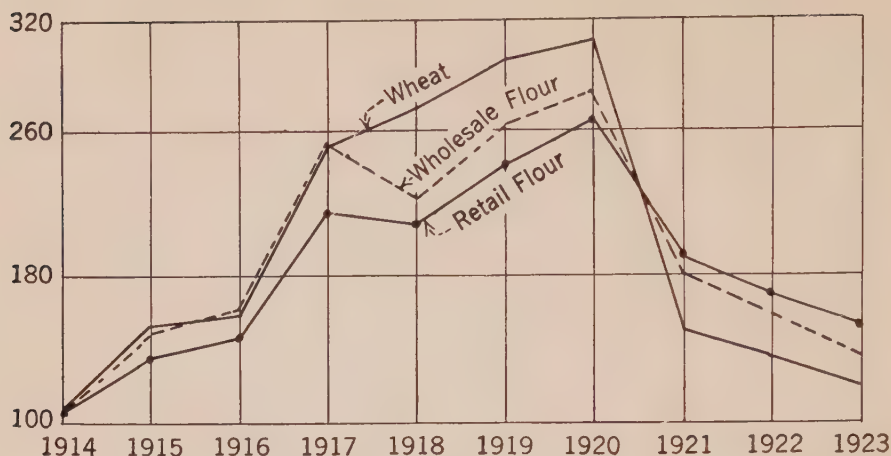


FIG. 32.—Prices paid to farmers for wheat in North Dakota, and wholesale and retail prices of flour in Minneapolis. Farm prices rose more rapidly and fell more rapidly than did prices of flour.

TABLE XLII

FARM, WHOLESALE, AND RETAIL PRICE OF WHEAT AND WHEAT FLOUR

1913=100

Year	Farm Price in North Dakota	Wholesale Price Flour in Minneapolis	Retail Price Flour in Minneapolis	Year	Farm Price in North Dakota	Wholesale Price Flour in Minneapolis	Retail Price Flour in Minneapolis
1913	100	100	100	1919	299	263	242
1914	114	112	109	1920	310	280	266
1915	153	147	136	1921	155	184	190
1916	157	160	144	1922	136	161	170
1917	249	250	217	1923	122	138	154
1918	273	223	210				

The rise in the price of wheat in the summer of 1924 was nearly all transmitted to farmers. The farm price of wheat in the United States rose from 84 cents per bushel in August, 1923, to 117 cents in 1924. The index number for flour at retail rose less.

Eggs and butter.—Eggs and butter are relatively valuable for their bulk. They go through no manufacturing processes in preparation for use. For these reasons, the transportation and handling costs are relatively less than for most other farm products. They

illustrate the same principle that inflation raises farm prices more than retail prices and deflation lowers farm prices more than retail prices. But the differences are much less striking than for most farm products.

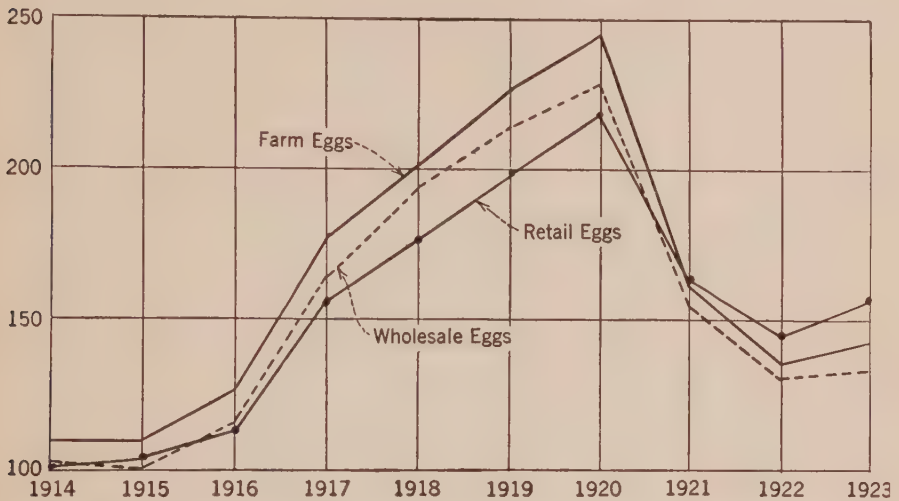


FIG. 33.—Prices paid to farmers for eggs in Iowa, and wholesale and retail prices of eggs in Chicago. Less city labor is involved in the shipping and marketing of eggs than for most farm products, but the same principle holds: when prices rise or fall, farm prices tend to move much more violently than do retail prices.

TABLE XLIII

FARM, WHOLESALE, AND RETAIL PRICES OF BUTTER AND EGGS
1913 = 100

Year	Farm Price of Eggs in Iowa	Wholesale Price Eggs, Firsts, Chicago	Retail Price Eggs, Chicago	Farm Price of Butter in Minnesota	Wholesale Price Creamery Extra Butter in Chicago	Retail Price Creamery Butter in Chicago
1913	100	100	100	100	100	100
1914	110	104	102	94	93	92
1915	110	101	104	96	92	93
1916	127	116	114	107	106	104
1917	178	164	155	137	133	128
1918	201	194	176	159	159	151
1919	227	214	199	193	189	177
1920	245	229	219	205	188	180
1921	161	155	164	132	135	135
1922	137	131	145	125	126	125
1923	143	137	157	146	148	148

Lambs.—In 1918 lambs in Idaho were 125 per cent above pre-war while leg of lamb in Chicago was only 70 per cent above pre-war. Lambs at retail in 1923 were higher than most foods and the farm price was nearly as high as the retail price.

TABLE XLIV
FARM, WHOLESALE, AND RETAIL PRICE OF LAMBS
1913 = 100

Year	Farm Price of Lambs in Idaho	Wholesale Price of Dressed Lamb, Chicago	Retail Price of Leg of Lamb, Chicago	Year	Farm Price of Lambs in Idaho	Wholesale Price of Dressed Lamb, Chicago	Retail Price of Leg of Lamb, Chicago
1913	100	100	100	1919	206	186	178
1914	100	102	103	1920	191	196	201
1915	111	110	107	1921	119	138	169
1916	135	123	113	1922	159	171	182
1917	215	161	142	1923	168	169	180
1918	225	182	170				

Cotton.—Prices of cotton in 1923 further illustrate the fundamental relationship of farm, wholesale and retail prices. Whenever the price of a product is high relative to wages (i. e., freights, manufacturing, and handling charges) the farm price is higher than the price of the product that has entered the channels of trade, as shown by the following index numbers of prices for December, 1923:

Farm price of cotton (1911-1913 = 100).....	267
Fairchild's index of cotton yarns (1911-1913 = 100).....	251
Fairchild's index of cotton goods (1911-1913 = 100).....	224
Bureau of Labor index of retail clothing (1913 = 100).....	176

Cotton yarn, which includes a small amount of city labor, was nearly as high as the farm price. Cotton goods, which require more labor, were lower, and the retail price of clothing was still lower.

Farm, wholesale, and retail prices in Canada.—Index numbers of prices of food products as paid to farmers, and wholesale and retail prices for Canada illustrate the same principle of price relationships. From 1915 to 1919, the index numbers of prices paid to farmers were higher than the index numbers of wholesale prices, and index numbers of wholesale prices were higher than retail prices. When prices fell, the percentage decline in retail prices was least and

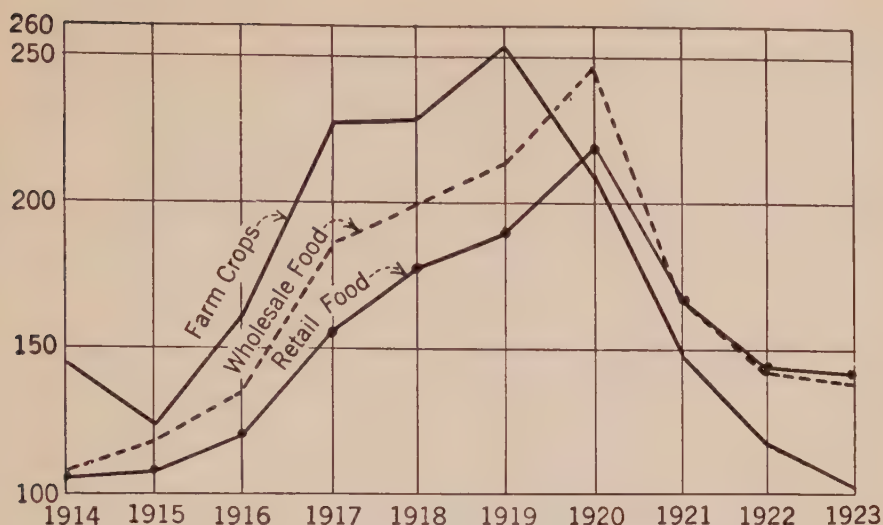


FIG. 34.—Prices paid to Canadian farmers for food products, and prices of food at wholesale and at retail in Canada. As is always the case when prices rise, handling charges rise slowly. Therefore farm prices rise more rapidly than retail prices. When prices fall, farm prices fall most rapidly.

TABLE XLV
FARM, WHOLESALE AND RETAIL PRICES OF FOODS IN CANADA

1913=100

Year	Farm Crops	Wholesale	Retail	Year	Farm Crops	Wholesale	Retail
1913	100	100	100	1919	254	217	190
1914	145	107	106	1920	207	246	219
1915	124	117	108	1921	149	166	166
1916	161	135	120	1922	117	142	144
1917	228	186	156	1923	101	139	142
1918	229	200	178				

in prices paid to farmers was most. In 1923 prices paid to farmers were only 1 per cent above the pre-war level, but food at retail was 42 per cent above pre-war.

Farm, wholesale, and retail prices in England.—The same principle is illustrated to some extent by prices in England. England is such a consuming center that farm prices in England partake more of the retail characteristics than do prices in exporting coun-

tries. In the United States farm prices rose most in the states that were far from the consuming centers. In states near the centers of consumption the discrepancies between farm and retail prices were at all times less. The farmer who retails his product receives the full retail price. The one who delivers direct to the wholesaler eliminates some of the handling charges, and, therefore, receives a price which follows retail prices more closely. The further the produce is from the consumer, and the more hands it must pass through the greater the discrepancy between farm prices and retail prices whenever there is a change in the price level.

Decline in farm prices not fully effective in increasing consumption.—Consumption is to a great extent dependent on price. When the farm price is cut in half, the farmer does not get the benefit of the increased consumption that would follow a halving of the retail price. In the days when most of the product was grown near the consumer, a reduction in the farm prices was accompanied by a more nearly comparable reduction in prices to consumers.

When farm prices are cut in half, retail prices are likely to be cut about one-fourth. In 1924, farm, wholesale, and retail prices were in close adjustment for those products for which the index number stood at about 180. To get to 120, the farmer had to cut his prices 33 per cent from the point at which prices would have been in adjustment with retail prices. But the other half of the retail price (that is, the handling charges) was not cut at all so that retail prices of food were about one-sixth rather than one-third below the point at which they would be in adjustment. Conversely, if the average retail price of foods rose from 150 to 180, it would mean a rise of from about 120 to 180 for the prices paid to farmers.

The agricultural depression not merely a question of supply and demand.—A change in the purchasing power of the dollar makes fundamental changes in price relationships in different parts of the channels of trade, which are entirely separate from the question of supply and demand. These changes, in turn, effect supply and demand and in from a few years to a generation will bring about adjustment.

This principle seems to have escaped the attention of many economists. The comparable principle that inflation leaves professors' salaries out of adjustment with day wages is well understood. Undoubtedly there are normal relationships between salaries and wages which are due to supply and demand, but rapid inflation

always raises wages of unskilled workers much more rapidly than it raises the pay of skilled workers. In ten to twenty years supply and demand will bring them into adjustment again, but the changes brought about by inflation are not what is usually meant by supply and demand.

The fact that deflation leaves laborers' wages high relative to other things, is known by many persons, but few realize that inflation without any change in supply or demand automatically stimulates agriculture, and that deflation without any change in supply or demand results in an agricultural depression. When prices double those who had formerly lent money continue to receive the same interest as before, but the money that they receive has only half its former value. This can not be said to be due to supply and demand.

Supply and demand remain in adjustment at the consumer's prices, but when inflation or deflation occur the farm prices are often more influenced by the change in the general price level than by changes in supply or demand. If wholesale prices double, prices to farmers would be much more than doubled. Supply and demand at the consumer's price are less disturbed than the relationships between farm and retail prices. When deflation occurs, the supply and demand at consumer's prices is much less affected than is the relation of farm prices to retail prices.

Agricultural depression a result of deflation.—A severe agricultural depression is an inevitable result of rapid deflation. Since it requires many years for wages and public service charges to decline, the disparity between farm prices and prices of the same commodities at retail must continue so long as deflation continues, unless a very striking shortage of farm products develops.

An increase in retail prices makes little change in handling charges and a large change in farm prices. Of course any change in one price always has some influence on other things, but judging by past relationships it seems probable that farm prices would come into close adjustment with retail prices, if retail prices of food were to rise to 75 to 80 per cent above pre-war. With the decrease in production per capita that has already occurred, a slightly lower figure might suffice. The relationships here described, together with the many years required to adjust taxes and debts to a new price basis, explain the reason why farmers are opposed to drastic deflation.

CHAPTER X

PRICES PAID TO FARMERS IN DIFFERENT STATES

Prices paid to farmers for food products.—Prices paid to farmers in the United States for food products are given in Table XLVII in the last column.

On the average there was little rise in the prices of food products until 1916. Prices then began to rise and advanced with great

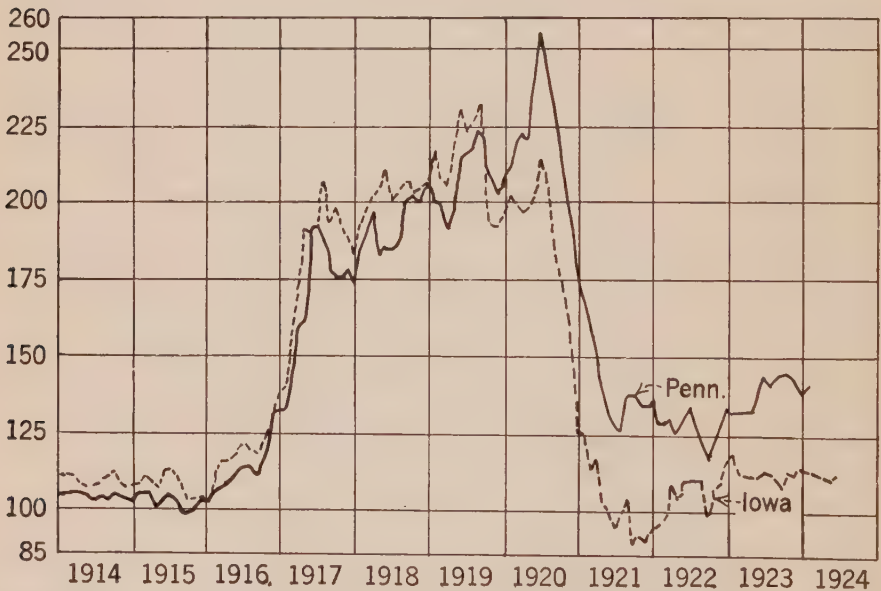


FIG. 35.—Prices paid to farmers in Pennsylvania and in Iowa. Prices in Iowa fell more than did prices in Pennsylvania.

rapidity during the years 1916 and 1917. In August, 1919, prices paid for food were 125 per cent above the pre-war level. Prices then fell, but reacted and reached the final peak of 132 per cent above pre-war in June, 1920. The agricultural panic then began and in eleven months prices fell to 22 per cent above pre-war. For

three years they remained practically at that level and in September, 1924, were only 29 per cent above pre-war.

Prices paid to farmers in the United States for all farm products.—When cotton, wool, and other non-food products are included the course of prices is very different, because the demand for clothing is very different from the demand for food, and because of the boll weevil. It is a mistake to use index numbers of all farm products and assume that they represent northern states. Such an index number is useful if one wishes to represent the entire country by a single figure.

Cotton fell very strikingly in the latter part of 1914. This lowered the index number for all farm products. Cotton began to rise in 1916 and farm prices reached a peak of 131 per cent above pre-war in August, 1919, then declined somewhat and finally reached a peak of 141 per cent above pre-war in June, 1920. During the panic period cotton and wool fell more in price than did food materials. The index number for all farm products fell to 8 per cent above pre-war in June, 1921. During the two years, 1922 to 1923, cotton was higher than food products and the index number for all farm products was materially higher than the index for food products.

Prices paid to farmers in the Southern States.—Index numbers of farm prices are included for Georgia, Alabama, and Texas. Since Georgia depends primarily on cotton, the index number for the state comes close to being a cotton index. The index number of farm prices for Georgia is higher than the index number for Texas. This does not, however, mean that Georgia is better off than Texas. Georgia depends primarily on cotton. This is very high in price, but the crop was so poor that the state is less prosperous than Texas which had a better yield of cotton and has more other things to sell.

Those farmers who had a normal yield of cotton in 1923 were very prosperous. Cotton in Georgia suffered unprecedented losses from the boll weevil in 1923 and the yield per acre was only 43 per cent of the pre-war average. Despite the fact that the index of the price of cotton, December 1, 1923, was 256, the index of the value per acre was only 109 and the purchasing power per acre was only 71. Large numbers of negroes left the state.

On the other hand, North Carolina which normally produces 252 pounds of cotton per acre produced 290 pounds in 1923. The index number of the value of the cotton crop per acre was 288 and

the purchasing power per acre was 187, and North Carolina farmers were very prosperous.

The price of cotton, which is the only thing the city man observes, is no criterion by which to judge the prosperity of the South when crops are very abnormal. The purchasing power per acre is a much better measure of prosperity.

Prices paid to farmers in the Northern States.—Two factors account for variations in the northern states—freight rates, and the different proportions in which the various farm products are grown. Freight rates were held down during the period of high prices, consequently the index number of prices rose higher in the

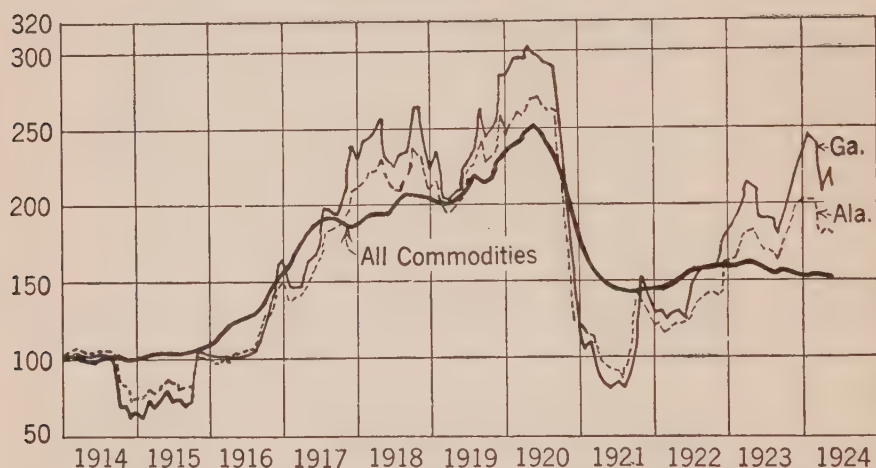


FIG. 36.—Prices paid to farmers in Georgia and in Alabama, and wholesale prices of all commodities for the United States.

western states than in the eastern states. When prices fell and freight rates were raised and handling charges were high, the prices paid to farmers for any given commodity fell more in the West than in the East. For the year, 1918–1919, index numbers of farm prices in New York, Pennsylvania, and Ohio were generally lower than for Iowa and North Dakota.

For the three years, 1921 to 1923, farmers in New York and Pennsylvania received better prices than farmers in the middle-western states. These differences were due in part to the kinds of products and in part to handling charges. For three years the index numbers for New York State averaged higher than those for any other state included in the table. There is little doubt but that

the index numbers of states still nearer markets, such as Connecticut, were higher than for New York.

Prices paid to farmers in Iowa in 1918 were double the pre-war level. They rose to 131 per cent above pre-war in August, 1919, and remained about double pre-war for another year. As in other states, they fell with great rapidity in the latter part of 1920 and reached a level of 10 per cent below the five-year pre-war average in September, 1921. For the three years, 1921 to 1923, they were little above pre-war and in May, 1924, were only 12 per cent above the pre-war level. For the three and one-half years ending in May, 1924, the average prices paid to farmers in Iowa were only 8 per cent above the five-year average before the war. During this same period, retail prices of foods in cities and wholesale prices of all commodities averaged over 50 per cent above pre-war.

Wheat did not drop in price as soon as some of the other commodities. Prices paid to farmers in North Dakota were lower in 1923 than at any other time during the panic period. The average for 1923 was 5 per cent above pre-war.

TABLE XLVI

INDEX NUMBERS OF PRICES PAID TO PRODUCERS OF FARM PRODUCTS

1910-14 = 100

Year	New York	Pennsylvania*	Ohio*	Iowa	North Dakota	Utah*	Oregon	Georgia	Alabama*	Texas	United States—All Farm Products	United States—All Food Products
1910	101	99	103	98	108	108	107	110	107	108	104	103
1911	97	94	89	87	101	91	97	103	99	98	94	92
1912	101	101	101	102	102	96	96	86	90	92	99	98
1913	97	100	103	103	89	101	98	98	99	100	99	101
1914	103	103	105	109	98	103	102	91	96	95	101	105
1915	100	102	104	107	123	109	106	80	86	93	101	106
1916	116	115	120	120	126	123	114	117	114	120	119	120
1917	170	170	181	181	199	168	168	184	171	177	180	180
1918	186	193	201	202	221	188	191	242	221	220	206	197
1919	206	206	216	211	237	193	198	238	222	222	215	210
1920	217	217	210	187	240	198	195	257	234	217	214	209
1921	144	140	130	102	125	107	119	105	108	105	119	128
1922	134	127	127	106	111	106	119	147	136	132	124	122
1923	142	138	133	113	105	127	119	202	178	167	137	122

* Index numbers for Pennsylvania were prepared by F. P. Weaver, those for Ohio by J. I. Falconer, those for Utah by J. O. Ellsworth, and those for Alabama by J. D. Pope.

TABLE XLVII

INDEX NUMBERS OF PRICES PAID TO PRODUCERS OF FARM PRODUCTS

Corresponding Months of 1910-14 = 100

	New York	Pennsylvania	Ohio	Iowa	North Dakota	Utah	Oregon	Georgia	Alabama	Texas	United States All Farm Products	United States Food Products
1910												
January....	101	101	106	103	109	117	108	113	110	111	107	105
February....	102	101	106	104	111	114	111	108	108	110	107	105
March.....	100	102	109	109	111	104	114	110	107	106	108	107
April.....	102	102	106	107	112	121	114	108	106	110	108	107
May.....	100	101	106	102	108	112	109	107	104	108	105	105
June.....	95	98	104	101	105	108	105	108	106	109	104	103
July.....	93	97	103	97	107	105	105	105	104	106	102	101
August.....	103	99	99	94	115	104	108	110	108	109	102	100
September..	105	99	100	95	107	104	107	123	114	109	103	101
October.....	101	98	100	92	108	105	100	118	107	104	102	101
November..	103	98	97	90	104	107	103	125	108	108	102	99
December..	102	98	97	89	104	100	100	123	108	107	100	98
1911												
January....	100	99	93	92	106	97	101	115	108	108	101	99
February....	99	94	88	87	105	91	100	115	109	107	97	94
March.....	96	91	86	83	100	93	97	111	107	104	94	90
April.....	93	89	84	80	99	93	95	111	107	102	92	88
May.....	93	88	83	80	101	90	97	110	107	102	92	88
June.....	93	90	85	80	99	91	98	110	104	102	92	88
July.....	95	93	89	84	97	88	99	109	104	103	95	90
August.....	94	96	91	91	98	92	99	103	99	97	97	94
September..	96	96	91	88	99	87	97	99	96	93	94	93
October.....	97	96	92	90	102	93	95	90	87	87	92	92
November..	100	96	93	94	106	87	95	81	82	82	92	94
December..	101	97	94	96	103	89	94	80	81	82	93	94
1912												
January....	101	99	97	97	106	87	94	71	79	82	93	95
February....	104	103	97	99	106	93	93	74	82	86	96	98
March.....	106	103	97	99	105	94	94	81	86	89	97	98
April.....	106	103	104	104	107	92	97	83	88	91	100	101
May.....	109	109	106	110	110	99	98	89	92	94	105	106
June.....	104	108	104	108	111	102	95	87	92	94	104	105
July.....	105	105	102	105	110	98	97	90	92	93	102	103
August.....	104	101	100	104	103	98	96	96	97	99	101	100
September..	98	98	99	101	97	98	95	92	93	94	97	98
October.....	94	96	102	103	93	95	96	91	94	94	98	82
November..	92	97	100	100	92	97	97	88	92	94	97	98
December..	94	98	101	98	88	98	95	95	98	97	97	97
1913												
January....	93	97	99	96	88	94	96	101	99	99	95	95
February....	92	96	102	99	88	99	96	98	97	97	96	97
March.....	94	98	102	101	89	101	96	95	96	99	97	99
April.....	93	98	103	103	87	95	95	95	96	98	97	100
May.....	94	99	102	101	88	99	96	92	93	96	97	99
June.....	97	99	105	104	91	101	99	91	94	96	98	101
July.....	100	101	103	105	93	104	99	93	96	97	99	102
August.....	96	101	102	102	89	103	99	94	96	96	98	101
September..	100	102	103	105	90	105	100	96	97	102	100	101
October.....	108	105	104	107	90	100	101	107	108	109	104	104
November..	108	105	105	109	89	103	99	109	110	107	105	105
December..	106	105	104	110	90	109	101	104	105	103	105	106
1914												
January....	104	105	105	111	92	101	100	100	103	100	104	106
February....	104	105	107	111	90	102	100	105	105	101	104	106
March.....	104	105	105	109	95	107	98	103	104	101	104	105
April.....	104	104	103	107	95	98	99	102	104	99	102	103
May.....	103	103	103	107	93	101	100	102	103	100	102	103
June.....	109	103	103	108	93	99	104	104	104	100	102	103
July.....	106	104	103	109	94	104	99	103	104	101	103	104
August.....	101	103	109	110	94	103	97	100	105	103	103	105
September..	100	105	107	112	107	106	101	71	85	87	101	108
October.....	100	104	103	109	106	107	107	70	83	84	98	106
November..	98	103	104	107	109	106	107	60	73	78	96	105
December..	97	102	105	108	114	104	110	65	75	82	96	105

TABLE XLVII—Continued

	New York	Penn- syl- vania	Ohio	Iowa	North Da- kota	Utah	Oregon	Geor- gia	Ala- bama	Texas	United States All Farm Prod- ucts	United States Food Prod- ucts
1915												
January....	97	105	109	108	122	101	110	63	74	82	98	106
February....	97	105	106	111	135	111	113	73	80	88	103	109
March.....	97	105	107	109	140	116	115	70	79	90	102	109
April.....	95	100	110	106	138	110	114	74	82	90	101	107
May.....	98	103	108	113	148	109	109	79	86	94	105	112
June.....	104	105	103	113	141	108	109	74	84	91	103	110
July.....	99	103	103	111	125	113	105	74	80	89	99	105
August.....	96	99	98	107	128	111	101	72	81	89	99	104
September...	97	99	99	102	93	110	99	77	82	93	96	100
October.....	98	100	104	104	98	108	97	105	102	104	101	102
November...	108	103	102	102	100	109	101	102	100	108	102	102
December...	104	102	103	100	104	109	100	102	100	105	101	101
1916												
January....	104	105	106	106	119	103	103	102	99	106	104	105
February....	107	107	109	114	132	113	106	102	100	106	109	110
March.....	108	108	113	116	116	119	109	101	98	107	108	111
April.....	108	110	112	116	116	113	107	101	101	107	110	112
May.....	113	113	113	120	120	120	109	100	101	108	112	115
June.....	116	114	116	121	115	118	107	103	105	110	113	116
July.....	116	113	120	119	111	123	110	105	105	112	114	116
August.....	111	111	121	118	112	123	112	107	109	115	115	118
September...	112	116	126	122	135	132	118	127	122	129	124	125
October.....	127	123	132	122	128	127	121	139	131	132	128	127
November...	138	132	138	132	153	134	130	160	145	150	140	138
December...	136	132	137	137	155	151	132	165	151	157	146	143
1917												
January....	137	132	145	140	156	146	130	147	138	144	142	142
February....	148	144	158	151	167	155	141	147	140	147	150	152
March.....	164	160	165	158	169	169	150	145	142	147	158	165
April.....	171	161	187	172	179	170	153	163	152	156	168	173
May.....	192	192	192	191	234	193	180	166	159	167	189	198
June.....	200	192	186	190	217	200	194	175	165	177	192	199
July.....	184	188	186	188	203	193	172	199	181	191	191	190
August.....	171	177	184	207	219	182	172	195	186	198	193	189
September...	165	175	187	193	198	188	187	193	186	194	189	187
October.....	176	175	188	198	214	184	182	206	191	191	192	189
November...	184	178	191	192	214	189	185	239	206	206	196	189
December...	172	174	198	184	214	193	175	232	211	209	196	189
1918												
January....	183	185	194	193	219	176	177	241	215	215	198	188
February....	184	191	199	196	218	179	176	242	221	220	202	191
March.....	186	197	198	201	227	196	182	247	222	227	205	194
April.....	175	183	197	203	233	178	179	258	229	227	206	193
May.....	190	186	199	210	230	187	183	229	218	214	203	196
June.....	177	184	199	201	219	182	195	224	209	210	198	193
July.....	181	185	196	203	218	183	190	233	210	216	202	196
August.....	184	199	201	207	218	190	201	233	218	206	205	202
September...	185	201	207	206	214	199	199	264	237	234	213	203
October.....	197	203	204	201	217	201	207	264	236	232	214	204
November...	198	205	200	200	218	200	203	241	226	226	211	204
December...	196	205	212	208	222	186	197	224	211	218	209	205
1919												
January....	199	200	206	217	227	191	199	236	216	218	211	206
February....	189	199	208	207	216	187	193	205	200	209	202	201
March.....	188	191	194	205	217	193	196	203	195	202	197	198
April.....	194	196	217	218	233	189	196	208	200	198	207	201
May.....	228	215	228	230	254	200	198	210	204	209	218	220
June.....	246	216	231	223	238	198	198	230	221	219	221	220
July.....	233	217	237	227	247	193	195	243	227	229	225	223
August.....	216	224	229	231	255	195	203	261	243	235	231	225
September...	212	215	211	203	223	201	203	245	229	228	215	207
October.....	199	206	205	191	235	188	201	251	231	229	210	200
November...	199	202	208	191	241	185	199	287	257	249	219	205
December...	205	206	213	196	255	194	194	284	248	241	220	206

TABLE XLVII—*Continued*

	New York	Penn- syl- vania	Ohio	Iowa	North Dak- ota	Utah	Oregon	Geor- gia	Ala- bama	Texas	United States All Farm Prod- ucts	United States Food Prod- ucts
1920												
January....	212	211	220	202	265	199	200	292	255	241	227	215
February....	219	219	220	199	260	206	208	296	261	240	228	216
March.....	223	223	223	197	245	222	214	294	259	248	226	213
April.....	220	220	230	198	266	209	205	302	266	242	231	218
May.....	248	241	237	203	287	224	211	299	267	241	240	229
June.....	272	255	238	214	276	229	203	294	264	239	241	232
July.....	246	244	224	207	267	213	207	292	262	238	239	230
August.....	225	231	209	188	237	201	205	289	260	230	224	215
September...	207	213	200	185	218	169	187	242	224	208	205	202
October.....	191	201	193	168	217	165	188	201	192	194	192	195
November...	183	194	172	152	190	151	164	163	165	156	172	181
December...	170	175	158	126	150	140	146	122	124	124	147	160
1921												
January....	167	169	151	125	152	123	144	107	116	110	138	152
February....	149	159	141	114	143	127	137	111	115	106	132	145
March.....	132	149	139	117	145	121	132	94	101	103	126	140
April.....	136	141	129	103	141	106	123	86	96	93	116	128
May.....	134	133	131	101	121	106	112	82	93	91	110	122
June.....	133	129	125	95	128	104	116	84	93	93	108	118
July.....	134	126	131	99	123	108	119	81	89	90	108	119
August.....	145	138	131	104	127	100	111	87	97	92	115	127
September...	155	138	123	90	112	99	107	115	109	107	115	122
October.....	157	134	123	91	110	97	109	153	142	134	124	123
November...	155	134	119	90	100	96	104	138	130	123	121	122
December...	148	135	120	94	100	100	106	128	120	117	118	120
1922												
January....	142	129	115	95	100	95	108	131	121	116	117	119
February....	139	128	123	99	101	110	109	125	115	113	116	119
March.....	138	130	131	108	125	121	120	130	121	121	124	128
April.....	132	125	131	104	131	111	113	130	122	123	123	125
May.....	138	131	135	109	132	117	122	126	124	123	126	129
June.....	138	134	128	110	132	127	127	144	137	132	129	129
July.....	141	128	127	110	119	117	128	152	140	139	129	126
August.....	125	123	119	110	114	113	121	159	144	136	125	120
September...	124	117	121	98	75	112	116	157	142	140	119	113
October.....	122	123	127	107	98	113	121	156	143	134	122	117
November...	131	129	130	110	101	115	121	177	160	150	129	120
December...	136	134	134	116	107	121	123	181	164	157	134	124
1923												
January....	127	132	133	118	102	122	125	190	165	161	137	126
February....	132	132	134	112	108	131	120	200	175	164	136	123
March.....	133	132	133	111	108	132	123	215	180	173	138	123
April.....	143	132	134	111	113	124	119	211	182	175	139	122
May.....	148	140	139	113	117	129	123	191	175	165	138	124
June.....	163	144	140	112	109	127	127	190	171	158	134	121
July.....	157	141	131	110	102	128	127	191	170	163	134	120
August.....	149	143	132	108	97	124	116	181	165	162	129	118
September...	151	144	129	114	99	128	115	190	174	153	133	122
October.....	147	142	129	113	105	128	114	210	185	166	138	123
November...	143	141	130	114	104	128	116	221	197	177	141	122
December...	135	138	129	114	103	127	109	233	201	186	143	123
1924												
January....	123	131	128	113	111	122	111	244	201	191	143	121
February....	123	133	130	113	113	123	110	238	203	185	142	122
March.....	125	133	128	111	117	128	108	211	180	171	136	119
April.....	130	132	130	110	113	124	106	220	182	167	135	118
May.....	129	130	130	112	111	124	109	212	181	164	135	118
June.....	135	136	127	111	110	124	113	201	...	165	134	119
July.....	129	...	125	119	125	...	118	198	...	166	138	124
August.....	133	...	133	130	129	...	...	202	...	175	146	132
September...	129	...	...	128	118	...	130	170	...	148	137	129

CHAPTER XI

WHEAT

Farm prices.—For the five years, 1910–14, the United States farm price of wheat was 87.5 cents per bushel. With the outbreak of the war, farmers expected high prices for wheat and greatly increased the acreage for the 1915 harvest. The yield per acre in 1915 was the highest ever obtained in America, and the total crop was over one billion bushels. This large production tended to hold prices

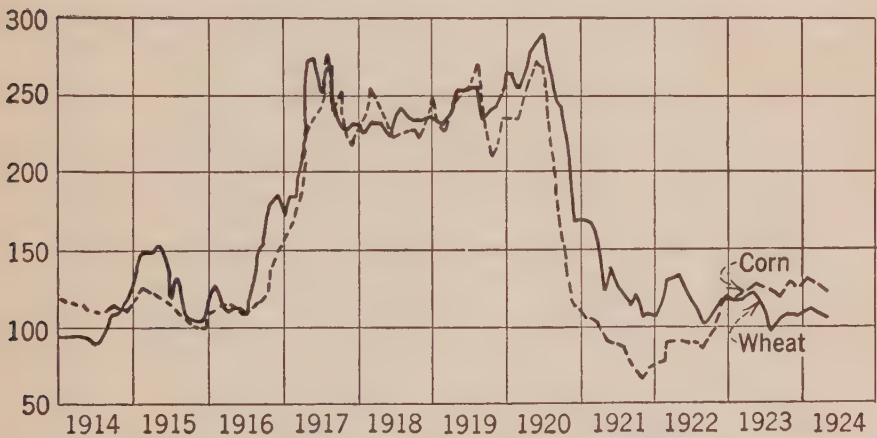


FIG. 37.—Prices paid to farmers for wheat and for corn. The acreage of wheat for 1924 was cut, but the corn acreage was expanded.

down and the acreage was reduced. The yield in 1916 was only 12.2 bushels as compared with 17 bushels in the previous year. The total production was only 636 million bushels. Prices rose rapidly, particularly in the spring of 1917 when it was found that there was not enough wheat to supply the demand. The farm price was \$2.48 in June. This led to violent agitation in the cities and was largely responsible for the establishment of the Food Administration. Farmers were accused of hoarding, whereas they had sold their wheat too rapidly for the good of the country, as well as for

their own good. In the summer of 1917 the price was fixed by order of Congress. This reduced the farm price to about \$2.00 per bushel. During 1918 the price was very stable, varying between \$2.01 and \$2.06 per bushel. When the restrictions were removed, the price of wheat again rose, selling for \$2.58 in June, 1920. When deflation began the price of wheat fell very rapidly, reaching \$1.44 in December, 1920. Since then the general tendency of wheat prices has been downward, even into 1924. The short world crop resulted in a striking recovery of prices in the summer of 1924.

TABLE XLVIII
PRICES PAID TO PRODUCERS FOR WHEAT IN THE UNITED STATES
Cents per Bushel

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	84. ⁴	89.3	89.0	88.8	89.8	90.8	87.4	85.0	87.4	87.4	88.0	86.0	88.0
1910	103.4	105.0	105.1	104.5	99.9	97.6	95.3	98.9	95.8	93.7	90.5	88.3	98.2
1911	88.6	89.8	85.4	83.8	84.6	86.3	84.3	82.7	84.8	88.4	91.5	87.4	86.5
1912	88.0	90.4	90.7	92.5	99.7	102.8	99.0	89.7	85.8	83.4	83.8	76.0	90.2
1913	76.2	79.9	80.6	79.1	80.9	82.7	81.4	77.1	77.1	77.9	77.0	79.9	79.2
1914	81.0	81.6	83.1	84.2	83.9	84.4	76.9	76.5	93.3	93.5	97.2	98.6	86.2
1915	107.8	129.9	133.6	131.7	139.6	131.5	102.8	106.5	95.0	90.9	93.1	91.9	112.9
1916	102.8	113.9	102.9	98.6	102.5	100.0	93.0	107.1	131.2	136.3	158.4	160.3	117.3
1917	150.3	164.8	164.4	180.0	245.9	248.5	220.1	228.9	209.7	200.6	200.0	200.8	201.2
1918	201.9	201.2	202.7	202.6	203.6	202.5	203.2	204.5	205.6	205.8	206.0	204.2	203.7
1919	204.8	207.5	208.0	214.2	231.1	228.4	222.0	217.2	205.7	209.6	213.2	214.9	214.7
1920	231.8	235.7	226.6	234.0	251.3	258.3	253.6	232.2	218.7	214.3	188.0	143.7	224.1
1921	149.2	149.3	147.2	133.5	110.7	127.4	112.2	104.8	101.2	105.6	94.2	92.7	119.0
1922	93.3	97.0	116.9	117.0	121.0	116.5	102.6	97.1	88.1	90.4	97.8	100.9	103.2
1923	105.6	103.7	105.1	106.9	109.8	106.6	95.1	84.2	88.7	93.2	95.1	92.3	41.5
1924	96.7	98.0	98.8	95.8	96.8	98.5	105.8	116.8	114.2				

Index numbers of wheat prices.—Expressed in terms of index numbers, the yearly average prices of wheat during 1915 and 1916 were about one-third above the five-year pre-war average, Table XLIX. During 1917, 1918, and 1919, wheat was about two and a quarter times the pre-war level. From the peak, 290 in July, 1920, wheat prices fell to 99 per cent of pre-war in August, 1923. During 1922, and 1923, wheat prices were about 10 per cent above the pre-war level, while the general price level was about 50 per cent above, and the non-agricultural products, which farmers buy, were about 60 per cent above pre-war.

Purchasing power of wheat.—The farm price of wheat in 1923 was nearly down to the pre-war level, and the purchasing power of wheat per bushel was far below. To the farmer who had to

TABLE XLIX

INDEX NUMBERS OF PRICES PAID TO PRODUCERS OF WHEAT IN THE UNITED STATES
Corresponding Months, 1910-14 = 100, Calculated from Table XLVIII

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	118	118	118	118	111	107	109	116	110	107	103	103	112
1911	101	101	96	94	94	95	96	97	97	101	104	102	98
1912	101	101	102	104	111	113	113	106	98	95	95	88	103
1913	87	89	91	89	90	91	93	91	88	89	88	93	90
1914	93	91	93	95	93	93	88	90	107	107	110	115	98
1915	123	145	150	148	155	145	118	125	109	104	106	107	128
1916	118	128	116	111	114	110	106	126	150	156	180	186	133
1917	172	185	185	203	274	274	252	269	240	230	227	233	229
1918	231	225	228	228	227	223	232	241	235	235	234	237	231
1919	234	232	234	241	257	252	254	256	235	240	242	250	244
1920	265	264	255	264	280	284	290	273	250	245	214	168	255
1921	171	167	165	150	123	140	128	123	116	121	107	108	135
1922	107	109	131	132	135	128	117	114	101	103	111	117	117
1923	121	116	118	120	122	117	109	99	101	107	108	107	112
1924	111	110	111	108	107	108	121	137	131				

exchange bushels of wheat for pounds of sugar and tons of coal, the purchasing power of a bushel of wheat is more significant than the price of wheat. In September, 1923, the purchasing power of wheat was only 64 per cent of normal, and in April, 1924, was only 72 per cent. According to Secretary Wallace, "A suit of clothes

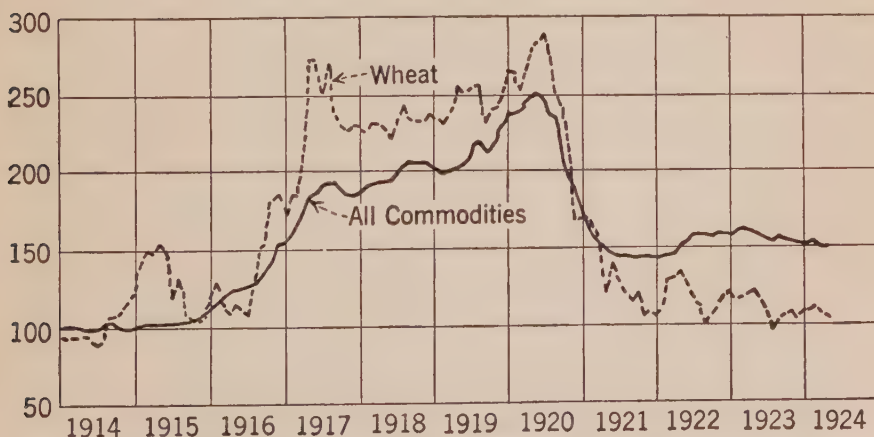


FIG. 38.—Prices paid to farmers for wheat, and wholesale prices of all commodities. The large crop in 1915 depressed prices. The very short crop in 1916 raised prices and led to price fixing. Prices were very low for the three years 1921 to 1923, but rose with the short crop of 1924.

which cost the farmer in North Dakota 21 bushels of wheat in July, 1913, cost 31 bushels in 1923, and a wagon which then cost him 103 bushels would now cost him 166.”¹

The low purchasing power of wheat is far-reaching in its effects because it is one of our most important cash crops. According to the 1919 census, three-fourths of the farmers in North Dakota, Kansas, and the Palouse district of Idaho and Washington, and two-thirds of the farmers in South Dakota grew wheat. The most seriously distressed regions were in the Dakotas and Montana. These regions practice a diversified agriculture, selling horses, beef cattle, and oats as well as wheat. Oats and beef cattle were even cheaper than wheat, and horses were practically unsalable.

In most of this region the crops were poor when prices were high, so that the farmers had all the disadvantages with none of the advantages of inflation. The Federal Government encouraged them to go more heavily in debt by lending them \$8,500,000 for the purchase of high-priced seed and feed. The farmers who are solvent have these additional debts to pay. The government efforts to collect from the insolvent will take a considerable part of that collected from the solvent ones.

War demand for wheat.—From 1917 to 1920 the practically universal opinion in the United States was that unlimited supplies of food would be needed and it was the obligation of the farmer to break up pastures, clear land, lay tile drains, buy machinery, and go in debt as much as necessary in order to produce more food, regardless of cost. Every city paper was filled with advice for agricultural expansion.

Mr. Houston, the Secretary of Agriculture, in his annual report for 1917, stated: “I can not emphasize too strongly the urgent necessity of doing everything possible to bring about a still further increase in production of all essential commodities, particularly of the staple crops and livestock.”²

“Food relief after the armistice was imperative not only for the peoples of the new small friendly nations, but also of the enemy countries. It became the key to the whole situation and to the establishment of a real peace. . . . Europe had to be fed . . . if European civilization . . . including our own, was to be preserved. . . . It was estimated that Europe would need to import at least

¹ Wallace, H. C.—The Wheat Situation, a Report to the President, p. 2, 1923.

² Report of the Secretary, Yearbook of the Department of Agriculture, p. 48, 1917.

20,000,000 tons of bread grains alone, and that of this quantity 11,000,000 must come from the United States. . . . This burden America was able to assume because of the achievements of her farmers. The full story cannot be told; only the outcome can be suggested.”³

The feverish activity was not confined to the United States. Our government made large loans to foreign countries to buy and hoard farm produce. The combination of credit furnished by the United States Government and fear on the part of foreign governments resulted in large purchases in excess of current needs and created an artificial shortage. In 1921, during the depths of depression, these governments dumped their hoards on the market and helped to create an artificial surplus. England did not dispose of the last of her bacon and butter until the summer of 1921. In the winter of 1921, Italy was still struggling to get rid of her hoards of high-priced sugar. When the United States Government finished dumping its wool stocks, the farm price was about 15 cents and the sheep industry was prostrated.

It is interesting to compare the editorials and advice of the inflation period with those of the deflation period. Judging by most of the latter discussions of the agricultural situation, the essential difficulty is that farmers very foolishly expanded production and even more foolishly borrowed some money to do it, and the present difficulty is to be charged to these stupid acts.

Purchasing power of winter wheat per bushel and per acre.—The farm price of winter wheat on December 1 is given in Table L. Compared with pre-war prices as 100, prices in 1923 were but 8 per cent above pre-war. Wholesale prices in December were 54 per cent above pre-war, and a bushel of wheat had a purchasing power of 70. This is the lowest exchange value a bushel of wheat has had since data are available (34 years). The actual farm buying power was even less because such a large proportion of the crop went for taxes and interest payments.

The buying power of the farmer is dependent on the price per bushel, but is also dependent on the weather. The average value per acre of the crop harvested in 1923, at the prices of December 1, was \$13.76. This was somewhat below the five-year pre-war average. If all the money obtained from an acre of winter wheat

³ Houston, D. H., Report of the Secretary, Yearbook of the United States Department of Agriculture, 1919, p. 9.

were used to purchase general commodities at wholesale, the acre would have purchased only 62 per cent of the pre-war amount. Of course the actual purchases would have to be much less, as taxes and interest payment called for more than twice the pre-war number of dollars.

Considerable areas of every crop are always left unharvested, either because of drought, destructive storms, insect pests or other causes. In 1923 the value of the winter wheat per acre sown was \$13.53. The acreage abandoned was less than normal, so that

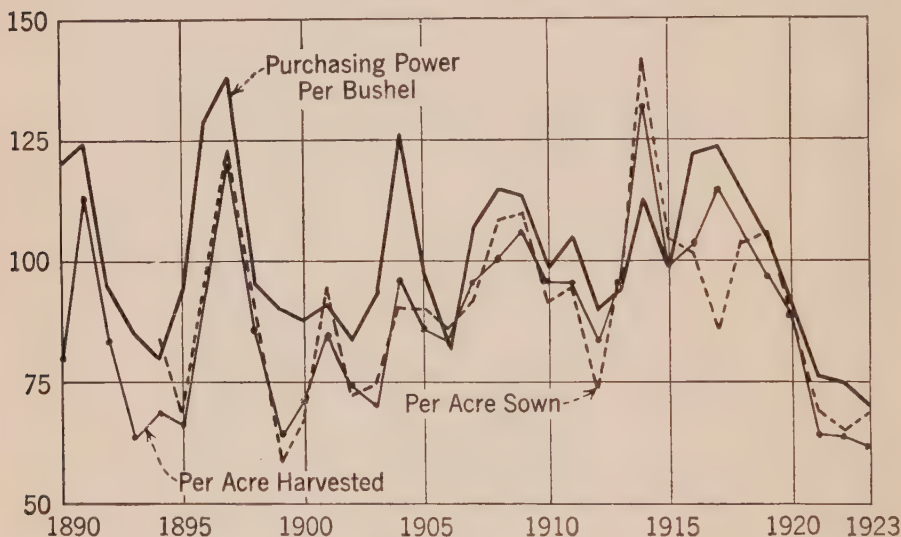


FIG. 39.—Purchasing power of winter wheat per bushel, per acre sown, and per acre harvested. The purchasing power per acre sown is a better measure of farm conditions than is the price per bushel.

returns per acre sown were relatively better than the returns per acre harvested. The purchasing power per acre sown was 68 per cent of pre-war. Since the abandoned acreage does not have to be harvested, a figure somewhere between the purchasing power per acre planted and per acre harvested would best represent the profitability of the crop.

The error is almost universally made of considering prices that come within one's experience applicable to all persons connected with the industry. For example, on December 1, 1917, the index number of the price of a bushel of winter wheat as sold by farmers was 231, or farmers received more than double the pre-war price.

TABLE L
FARM PRICES AND PURCHASING POWER OF WINTER WHEAT IN THE
UNITED STATES AT DECEMBER 1 PRICES *

Year	Per Bushel			Per Acre Harvested			Per Acre Sown		
	Farm Price per Bushel (Cents)	Index Number (1910-1914 = 100)	Purchasing Power (1910-1914 = 100)	Farm Value per Acre Harvested	Index Number (1910-1914 = 100)	Purchasing Power (1910-1914 = 100)	Farm Value per Acre Sown	Index Number (1910-1914 = 100)	Purchasing Power (1910-1914 = 100)
1890	87.5	100	120	\$9.50	66	80	\$9.17	71	86
1891	88.0	100	125	12.95	90	113			
1892	65.1	74	95	8.93	62	79			
1893	56.3	64	85	6.78	47	63			
1894	49.8	57	80	6.97	49	69	7.61	59	83
1895	57.8	66	94	6.68	47	67	6.23	48	69
1896	77.0	88	129	9.05	63	93	8.82	68	100
1897	85.1	97	139	12.01	84	120	11.12	86	123
1898	62.2	71	96	9.23	64	86	8.60	67	91
1899	63.0	72	90	7.25	51	64	6.13	47	59
1900	63.3	72	88	8.45	59	72	7.18	56	68
1901	66.1	75	91	10.03	70	85	10.01	78	95
1902	64.8	74	84	9.33	65	74	8.22	64	73
1903	71.6	82	94	8.80	61	70	8.40	65	75
1904	97.8	112	127	12.12	85	97	10.29	80	91
1905	78.2	89	98	11.22	78	86	10.75	83	91
1906	68.3	78	82	11.37	79	83	10.74	83	87
1907	88.2	101	107	12.84	90	96	11.41	88	94
1908	93.7	107	115	13.52	94	101	12.97	100	108
1909	102.4	117	114	15.70	110	107	14.55	113	110
1910	88.1	100	98	13.99	98	96	12.08	94	92
1911	88.0	100	105	13.00	91	96	11.61	90	95
1912	80.9	92	90	12.18	85	83	9.74	75	74
1913	82.9	95	94	13.69	96	95	12.91	100	99
1914	98.6	112	113	18.76	131	132	18.20	141	142
1915	94.7	108	98	15.45	108	96	14.88	115	105
1916	162.7	186	122	22.53	157	103	19.95	155	102
1917	202.8	231	124	30.72	214	115	20.66	160	86
1918	206.3	235	114	31.40	219	106	27.56	213	103
1919	210.5	240	105	31.70	221	97	31.09	241	106
1920	148.6	169	92	22.67	158	86	20.22	157	86
1921	95.1	108	76	13.15	92	64	12.72	99	69
1922	104.7	119	75	14.50	101	64	13.37	104	65
1923	95.0	108	70	13.76	96	62	13.53	105	68

* Values and acreages as reported by the Department of Agriculture. Purchasing power is calculated by dividing the price index by the index numbers of prices of all commodities for December, Table XXXI. Before 1900 the index numbers are not available for December. The average for the year and following years is then used.

Wheat was higher in price than other commodities and had a purchasing power of 24 per cent above the pre-war average. Only four times in the past thirty-four years did wheat have a higher purchasing power. The apparently high price led to government action lowering the price of wheat.

So far as the writers have observed no public discussion went deeper than this superficial point of view. The returns to the farmer were dependent not only on price but also on yield. The yield per acre harvested was poor and the acreage abandoned extremely high, so that the purchasing power per acre sown, instead of being

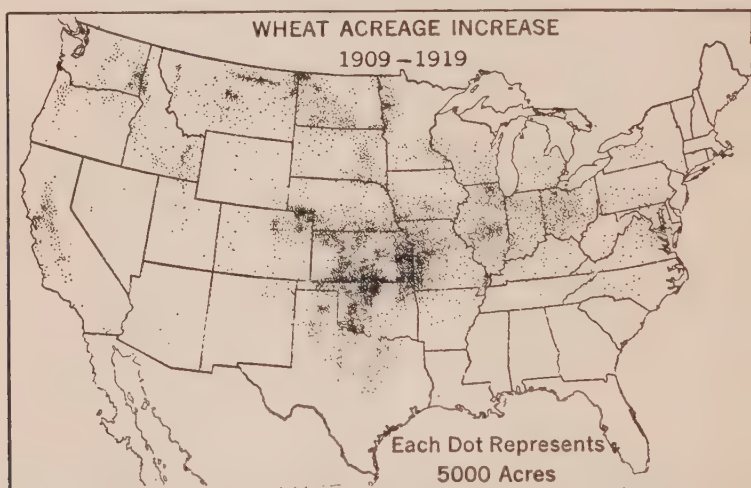


FIG. 40.—Increase in the wheat acreage, 1909 to 1919. Most of the increase took place in the semi-arid regions and in the corn belt.

24 per cent above pre-war, was 14 per cent below pre-war. The city man looking at prices believed the farmer to be an unreasonable profiteer. The farmer who planted winter wheat found that he was unable to exchange the product of an acre planted for the normal amount of city-made goods. From his standpoint it was the cities that had been profiteering.

Consumers do not all buy at any one price. The housewife buys bread and draws her conclusion of the prosperity of the farmer from the price of bread. The miller buys wheat and is equally sure of the prosperity of the farmer, his views being based on the price he pays for wheat.

The wheat grown by farmers in Montana in 1917 had a pur-

chasing power of only 59 per cent of the pre-war amount of goods per acre. In Ford County, Kansas, the purchasing power per acre in 1917 was nothing, because the yield was not sufficient to provide seed.

Increase in wheat acreage.—As a part of the war program, the government requested farmers to plant 47 million acres of winter wheat in the fall of 1918, an increase of 12 per cent over the preceding year. They actually planted 49 million acres. The total acreage of fall and spring wheat harvested in the fall of 1919 was 75,694,000 acres, which was more than 50 per cent above the pre-war average. Speakers were sent throughout the country to stimulate greater production.

Of the 28,500,000 acres increase in total wheat area during the war, about 22 million acres were winter wheat. The larger part of this increase was in the semi-arid regions, where crops are uncertain. In these regions there is little reserve capital; so that it is difficult to stand periods of adversity. Many pastures and some range land were plowed up. In these regions it is easy to plow up pastures, but very difficult to get the land back to grass, so the damage resulting from the expansion of the wheat acreage will require years to overcome.

The United States and Canada are one agricultural unit. The production of wheat in this area has increased much more rapidly than population. For the ten years, 1902 to 1911, these countries produced an average of 797 million bushels of wheat, or 8.6 bushels per capita. For the ten years, 1912 to 1921, these countries produced an average of 1067 million bushels, or 9.8 bushels per capita.

Profits and losses from holding wheat.—Considerable advice has been given farmers on holding wheat. Some persons believe the real difficulty with the farmers is that they do not "merchandise" their wheat properly. These advisers think that wheat should be distributed according to market demands. Others are equally sure that the difficulty is that farmers hold their wheat too long.

Seasonal variation in the price of wheat is less than for most farm products. For this reason the profits and losses from holding wheat are less than for some other crops. The small seasonal variation is due in part to the ease with which wheat is stored and in part to the fact that wheat is a world crop and is harvested somewhere every month in the year.

Prices of No. 1 Northern Wheat f. o. b. afloat in New York City are given in Table LII. As an average for the thirty-four years, the December price was 2.9 cents above the September price. The May price for thirty-three years averaged 4.6 cents above the September price. The year 1897 is omitted from the May prices because of the disturbed market due to the Leiter corner.

When dealing with the price of wheat over a series of years adjustment must be made for the varying values of a dollar. If wheat prices are compared with wholesale prices of all commodities this factor is eliminated.

While there may be little profit in holding wheat year after

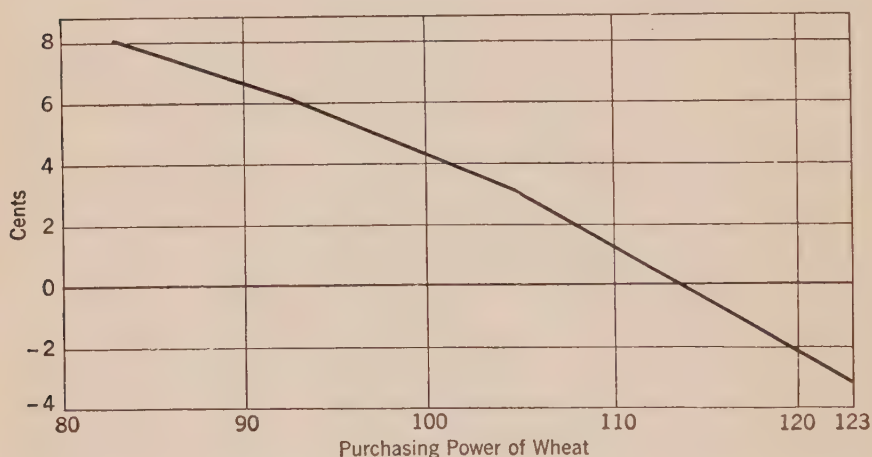


FIG. 41.—Purchasing power of wheat in September, and advance in price by the following May. When the purchasing power is high, it usually pays to sell early; when low, it usually pays to hold.

year, the prices do show that in certain years large profits can be made. In the nine years when the purchasing power was less than 90, there were only two years in which wheat did not advance in price. The average advance in December was 3.6 cents and by the following May 8.1 cents and at the end of a year 10.1 cents.

In the six years when wheat had a purchasing power of over 110, there were only three cases when December wheat was as high as September, two cases in which May wheat was as high as September, and only one case when wheat a year later failed to decline. The average decline to December was 0.6 cent, to May 3.3 cents and to the following September 21.7 cents.

If we assume that the average advance, 2.9 cents, is enough to pay for holding to December, and 4.6 cents just enough for holding to May, comparison can be made on the basis of profits.

In the twelve years when September wheat had a purchasing power of over 100, there were only two years in which the advance by December was sufficient to pay a profit. In four years the May price advanced enough to make a profit and in no case was the price of wheat the following September enough to pay for holding.

TABLE LI

AVERAGE ADVANCE IN THE PRICE OF WHEAT RELATED TO PURCHASING POWER,
FROM TABLE LII

Purchasing Power	Number of Years	Advance in December Price Over September	Advance in May Price Over September	Advance in September of following Year Over September
		(Cents)	(Cents)	(Cents)
Under 90.....	9	3.6	8.1	10.1
90-99.....	11	4.3	6.1	7.4
100-109.....	8	2.7	3.4	-3.1
Over 110.....	6	-0.6	-3.3*	-21.7
Average.....	34	2.9	4.6*	0.5

* May, 1897, omitted because of the Leiter corner in wheat.

For the twenty-two years when the purchasing power was less than 101, the advance by December was sufficient to make a profit in ten years. The advance by the following May was enough to make a profit in sixteen years.

Apparently when wheat has a high purchasing power there is a very great risk of loss by holding and apparently when wheat has a low purchasing power there is a good chance of profiting from holding.

When wheat is high it is usually due to low yields per acre. It is always being harvested somewhere in the world. It is not probable that low yields will continue for a full year, and even more improbable that the crops for the next year will also be poor. High prices also tend to increase the effort in production so that high prices are more likely to be followed by low prices than by continued high prices. Conversely, low prices are usually due to excessive

crops which are not likely to continue. The most probable future price of wheat is a price nearer to the normal purchasing power than are present prices.

All the prices previously given are New York City prices. The spread between farm prices and city prices is greatest in the months when heavy marketing is taking place. The profits from storing on the farm are, therefore, greater than city prices indicate. When the rush of marketing takes place and all the marketing facilities are crowded, large margins are taken; when the facilities for handling wheat are not fully used a narrower margin is charged, because operation at a low profit is better than idleness.

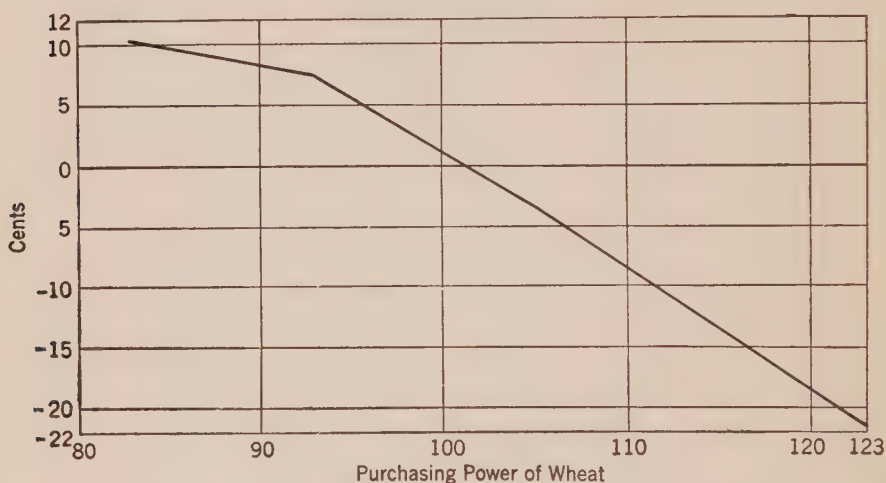


FIG. 42.—Purchasing power of wheat in September, and the advance in price in one year. When wheat is low in price relative to other things, it usually pays to hold it; when high, it usually pays to sell.

The cheapest place to store grain is on the farms that already have storage room. If a farmer has storage room that would otherwise be idle, the cost of storage is the interest and shrinkage. Many good farmers regularly follow the practice of storing when crops are cheap and selling promptly when prices are good.

Based on the above reasoning the writers published the following statement in the fall of 1923 when the purchasing power of wheat at farm prices was only 64. By September, 1924, the farm price had risen to \$1.14 per bushel.

“At the present time the acreage of wheat in the world is greater than is needed. Comparative prices show that consumers

TABLE LII

RELATION OF THE PRICE OF WHEAT TO PROFIT AND LOSS FROM HOLDING
Prices for No. 1 Northern Wheat at New York in Cents *

Crop Year	Price, Sep- tember	Pur- chasing Power, Sep- tember†	Price, Decem- ber	Price, May, Follow- ing Year	Price, Sep- tember, Follow- ing Year	Amount by Which the Price Rose Above the September Price		
						Decem- ber	May, Follow- ing Year	Sep- ember, Follow- ing Year
1894	57.3	73	60.1	73.1	63.5	2.8	15.8	6.2
1895	63.5	80	69.3	73.3	70.7	5.8	9.8	7.2
1893	72.1	82	67.1	58.7	57.3	-5.0	-13.4	-14.8
1906	83.6	82	91.0	107.7	118.6	7.4	24.1	35.0
1902	79.6	84	85.2	87.8	92.3	5.6	8.2	12.7
1901	76.7	85	85.8	83.1	79.6	9.1	6.4	2.9
1913	97.3	85	98.1	103.0	123.4	0.8	5.7	26.1
1887	81.0	88	91.0	96.9	99.6	10.0	15.9	18.6
1912	100.2	89	95.8	100.2	97.3	-4.4	0	-2.9
1884	88.6	90	82.9	102.9	93.0	-5.7	14.3	4.4
1889	85.1	90	85.8	98.8	101.9	0.7	13.7	16.8
1892	78.8	92	76.5	77.4	72.1	-2.3	-1.4	-6.7
1899	79.0	92	78.4	74.4	84.8	-0.6	-4.6	5.8
1900	84.8	92	82.6	84.3	76.7	-2.2	-0.5	-8.1
1905	91.8	93	96.1	91.6	83.6	4.3	-0.2	-8.1
1896	70.7	94	103.5	82.0	102.7	32.8	11.3	32.0
1898	74.6	94	75.7	82.5	79.0	1.1	7.9	4.4
1903	92.3	94	94.1	101.1	125.4	1.8	8.8	33.1
1886	86.6	95	90.3	97.1	81.0	3.7	10.5	-5.6
1909	108.9	99	122.1	116.6	122.0	13.2	7.7	13.1
1880	106.4	100	119.3	126.4	147.1	12.9	20.0	40.7
1882	108.5	100	109.8	123.2	114.6	1.3	14.7	6.1
1885	93.0	101	94.0	88.6	86.6	1.0	-4.4	-6.4
1888	99.6	106	104.9	83.2	85.1	5.3	-16.4	-14.5
1910	122.0	107	117.5	109.4	113.6	-4.5	-13.6	-8.4
1911	113.6	107	114.1	126.9	100.2	0.5	13.3	-13.4
1883	114.6	108	113.8	105.3	88.6	-0.8	-9.3	-26.0
1908	111.8	109	117.9	134.3	108.9	6.1	22.5	-2.9
1890	101.9	111	104.1	113.9	103.3	2.2	12.0	1.4
1907	118.6	111	119.3	115.9	111.8	0.7	-2.7	-6.8
1891	103.3	113	105.4	96.5	78.8	2.1	-6.8	-24.5
1904	125.4	128	123.2	106.8	91.8	-2.2	-18.6	-33.6
1897	102.7	135	101.9	156.8	74.6	-0.8	54.1	-28.1
1881	147.1	140	141.7	146.8	108.5	-5.4	-0.3	-38.6

* Statistical report of the New York Produce Exchange.

† The five-year average price of wheat for September, 1910-1914, was 111.3. To find the purchasing power, the price in September is divided by this figure and the resulting index number is divided by the index number of prices of all commodities, Table XXXI.

desire some of the effort now expended in wheat production to be devoted to the production of other things. It is, therefore, not to be expected that the profits from holding wheat will be as high as usual when the purchasing power is so low. At United States farm prices, wheat has a purchasing power of 64. Apparently the farmer who has storage room and who can finance himself has a good chance for profit from holding wheat this year. If the price does not rise by next fall, he can sell the old crop and hold the new one next fall."⁴

The usual point of view is given by George E. Roberts, vice-president of the National City Bank of New York, who is quoted in an interview in the *New York Times* for June 1, 1924 as saying: "I don't suppose there is any more persistent fallacy among farmers than the notion that the price of wheat is jacked up after it leaves their hands so as to give the dealers big profits. The farmer has been told this for years and he likes to believe it. Maybe it gives him a sense of martyrdom, which is said to be pleasant. But if you look at a chart of the monthly prices of wheat on the Minneapolis market for the last twenty-nine years you will find that the average for the highest month, May, was only about 6 cents above the average for the lowest month, September. Six cents is a modest sum to cover warehousing, interest, insurance, shrinkage and the risk of market fluctuation. The figures have been compiled by various authorities, including the Department of Agriculture at Washington, in each case with similar results. So if the farmer held his grain the charges wouldn't leave him any better net profit, probably, than he gets when he disposes of it just after the harvest. If he admitted this it would be disturbing, because he has preconceived notions about it. He thinks, like as not, that the dealers and the manufacturers and the bankers have got it in for him."

While it is true that the average advance during the season is small, the number of years when the advance is very great is sufficient to cause the discontent mentioned by Roberts. For a farmer always to sell wheat at any given time regardless of prices is as foolish as it would be always to plant at a given date regardless of weather. The most effective thing the individual farmer can do to meet the situation is to have sufficient granary room so that he can hold his wheat until he is ready to sell. The traditional method

⁴ Warren, G. F. and Pearson, F. A., *Farm Economics*, No. 5, Aug. 28, 1923.

of thrifty farmers of usually selling promptly when prices are high and holding when prices are low, is sound.

Effect of the tariff.—Many kinds of wheat are grown in the United States. The supply of some kinds is considerably greater than the consumption, and the supply of hard spring wheat is less than the consumption. From 1909 to 1913, when there was a 25 per cent tariff, the price of No. 1 Northern Spring Wheat at Minneapolis generally ranged from 5 to 10 cents above Winnipeg. Under the tariff of 10 cents from 1913 to 1916 the prices were practically

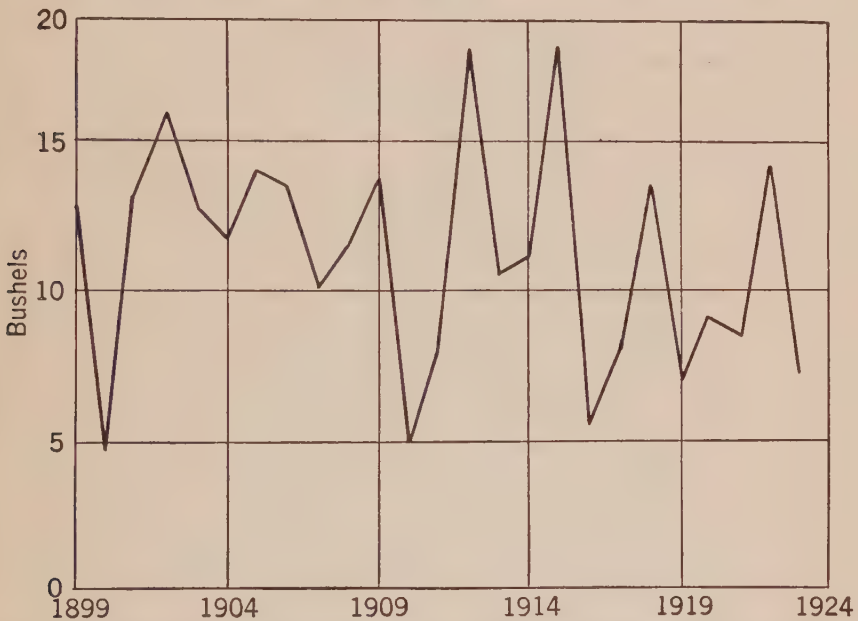


FIG. 43.—Yields of wheat in North Dakota. The rainfall causes such variation in yield as to make frequent periods of hard times, interspersed with periods of prosperity.

on the level. Under the tariff of 1922 the price in Minneapolis was usually about 20 cents above the price at Winnipeg, although the fluctuations were very wide.

In 1922 about 23 million bushels were imported from Canada, about one-half of which paid the duty and was consumed in the United States.

The hard winter wheats of Kansas and Nebraska are also affected to some extent, because they are somewhat similar to the hard spring wheat. If the price of American wheat of the same grade were not affected by the tariff, it would not seem probable that

millers would pay 25 cents extra to get the Canadian wheat. The tariff has little effect on the soft winter wheats of the eastern states and of the Pacific coast. On those it would be very difficult to measure the effect.

Unrest in wheat regions.—Much of the wheat crop is grown in regions where yields are very uncertain. Farmers often have to live and pay their expenses for a year or more without receiving any income. When we realize that in cities so many persons are unable to finance themselves when paid once a month, that the practice of weekly wage payments is common, it need not cause

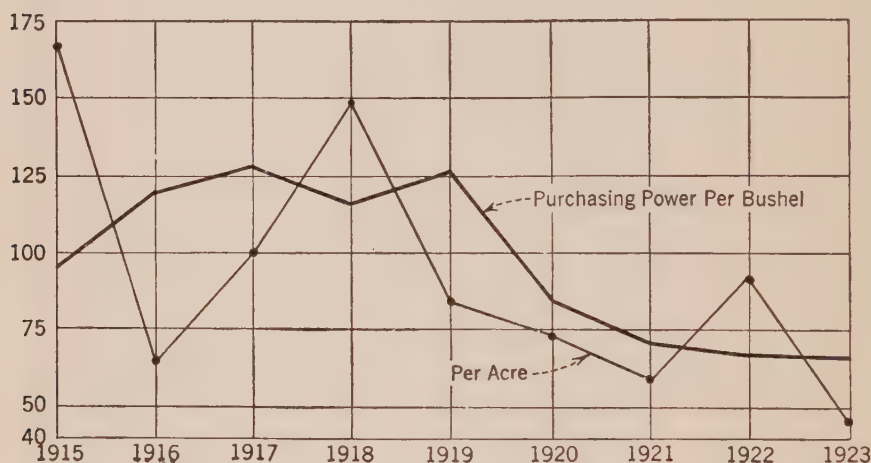


FIG. 44.—Purchasing power of wheat per acre and per bushel in North Dakota. The great variation in yield makes prices less significant than the purchasing power per acre.

surprise to learn that certain wheat farmers are dissatisfied when they have to wait from twelve to thirty-six months for a pay check. The series of years with low yields combined with poor quality had much to do with the interest in the Nonpartisan League. The financial deflation of the post-war period created an interest in the tariff and in the McNary-Haugen Bill. When any class of citizens are in serious distress from causes outside their control, they naturally seek outside aid, whether the trouble be due to weather or to financial policies of the government or to a combination of both.

In Ford County, Kansas, the yield for ten years varied from 0.3 bushel per acre harvested to 19 bushels in different years. In 1917 and 1918 the total crop was not sufficient to supply the seed,

and in 1923 it was about enough for seed. The years 1914 to 1916 were good years. For the seven years, 1917 to 1923, the average purchasing power of an acre was 38 per cent of the pre-war average. In three of these years the county did not produce more wheat than was needed for seed. In only one year of the seven years would the product of an acre of wheat exchange for as much as normal. For the entire state of North Dakota the average yields for successive years, beginning with 1909, were as follows: 14, 15, 8, 18, 11, 11, 18, 6, 8, 14, 7, 9, 8, 14, and 7. In the western part of the state the fluctuations were still greater. The years 1915 and 1918 were highly prosperous years for North Dakota. The product of an acre of wheat would exchange for more than a normal amount of other commodities. The year 1917 was an average year. In 1923 the low price of wheat, coupled with the low yield, made the purchasing power of wheat per acre but 46 per cent of the pre-war amount. The average purchasing power for the five years, 1919 to 1923, was 71 per cent of normal. The actual status was considerably worse than these figures indicate, because when yields are below normal the amount saved for seed requires a large per-

TABLE LIII
YIELD, PRICE, AND PURCHASING POWER OF WHEAT IN KANSAS

Year	State of Kansas						Ford County, Kansas *				
	Farm Price, December 1		Value per Acre		Purchasing Power		Yield		Value per Acre at Kansas Prices		Purchasing Power per Acre
	Cents per Bushel	Index Num- bers	Dollars	Index Num- bers	Per Bushel	Per Acre	Bushels per Acre	Index Num- bers	Dollars	Index Num- bers	
1910-14	85	.....	12.76	.....	.....	.....	11.0	.....	9.35		
1912	74	87	11.47	90	85	88	13.2	120	9.77	104	102
1913	79	93	11.27	88	92	87	2.8	25	2.21	24	24
1914	95	112	19.48	153	113	155	19.0	173	18.05	193	194
1915	89	105	11.12	87	95	79	10.1	92	8.99	96	82
1916	164	193	19.68	154	127	101	12.5	114	20.50	219	144
1917	198	233	24.16	189	125	102	0.4	4	.79	8	4
1918	199	234	28.06	220	114	107	0.3	3	.60	6	3
1919	215	253	27.95	219	111	96	11.0	100	23.65	253	111
1920	130	153	20.02	157	84	86	5.9	54	7.67	82	45
1921	93	109	11.35	89	76	62	8.6	78	8.00	86	60
1922	98	115	12.35	97	72	61	5.4	49	5.29	57	36
1923	91	107	9.19	72	69	47	0.8	7	.73	8	5

* Wallace, H. C., "The Wheat Situation," a Report to the President, p. 111, 1923. Data from 1910 to 1911 inclusive from J. C. Mohler, Kansas State Board of Agriculture.

centage of the crop. Making correction for this and for the high taxes and interest charges, it is probable that the purchasing power of the North Dakota farmers did not average more than half of normal.

TABLE LIV

YIELD, PRICE, AND PURCHASING POWER OF WHEAT IN NORTH DAKOTA

Year	Yield		Farm Price		Value per Acre		Purchasing Power	
	Bushels, per Acre	Index Number, 1910-14 = 100	Cents, per Bushel, Dec. 1	Index Number, 1910-14 = 100	Dollars	Index Number, 1910-14 = 100	Per Bushel	Per Acre
1910-14	10.5	.....	84	.....	8.60	100		
1915	18.2	173	87	104	15.83	184	95	167
1916	5.5	52	152	181	8.36	97	119	64
1917	8.0	76	200	238	16.00	186	128	100
1918	13.6	130	203	242	26.39	307	117	149
1919	6.9	66	241	287	16.63	193	126	85
1920	9.0	86	130	155	11.70	136	85	74
1921	8.5	81	85	101	7.22	84	71	59
1922	14.1	134	90	107	12.69	148	67	93
1923	7.1	68	86	102	6.11	71	66	46

Credit conditions in the spring wheat belt.—The number of insolvent farmers in much of the spring wheat belt in 1923 was so great that the banks were in many cases unable to make loans even though good security was offered. In the west north central states more than 321 banks failed in three years. In many cases this left farmers without banking facilities and many more banks came so near to failing that they have ceased to function.

Testimony at hearings before the Senate Committee on Agriculture and Forestry give a first-hand picture of the situation.⁵

Page 23, Rex Williard, farm economist, North Dakota Agricultural College, "In regard to obligations, 55 out of 61 owners reported first mortgages, and the average first mortgage amounted to \$6700 per farm; 19 reported second mortgages, and 3 reported third mortgages; 32 owners and 32 tenants out of 106 farms reported

⁵ Hearings before Committee on Agriculture and Forestry, U. S. Senate, 68th Cong., First Session on S1597, Jan. 11-24, 1924.

chattel mortgages; 101 farms had some sort of liabilities; only 5 farms out of the 106 had no obligations."

Page 45, Mr. Williard also reported that of the 106 farmers 13 had debts greater than their resources, 24 per cent of the farmers had debts equal to more than three-quarters of their assets. In this country however there were some good credit risks, for 24 per cent of the farmers had debts amounting to less than one-fourth of their assets.

Page 112, A. J. McInnes, president of the North Dakota Farm Bureau Federation, speaking of federal land banks loans, said, "This last year, 1923, approximately 30 per cent of our applicants were refused loans by reason of the fact that they were too much in debt. There is always a limit to what a man can owe and still get one of the Federal loans. Now, that was almost appalling to me, because a lot of those men were personal friends of mine, a lot of them young men, just starting out in life, married three or four years ago, and had acquired a half or quarter section of land, and were really trying to make good, and I wrote down to the Federal board myself in some of our cases, and put the case right up to them and said, 'Here, if we can not help out this particular man, what are we going to do for our farmers in the future?'" Continuing he said, "I went down to the store, the manager of which I knew, and I saw there farmers coming in and the hardware man breaking the bales. Twine is in 50-pound sacks. He was breaking the bales and selling four to five balls to the man. That astonished me, and I asked him 'John, what is the idea of selling a man four or five balls of twine? Is that all the wheat that is grown around here?' 'No,' he said, 'that is not it, Mac, at all. The point is we are all on a strictly cash basis, and this particular man that you saw getting this 25 pounds of twine, that is all the money he had to-day to buy that twine.'

"He says, 'They brought in 5 gallons of cream and sold it, got a few groceries, enough to last them a week, and had enough money left to buy this twine. Day after to-morrow that man will be in again with 5 gallons of cream, and he will buy so much more twine.' For a fellow that had been used to seeing it go out in ton lots from the same place it pretty near gives you the starts."

Page 91, George H. Hoople, North Dakota, farmer, "Right now in the country where I live we could not go into many of the banks and borrow money. There may be exceptions, but there

are not many banks that we could go into and borrow any money at all, no matter how much security we might have, because they simply have not got the money to let out. Right in our own community the banks have been renewing notes, but they have not been loaning any new money to pay off our hired help and pay our bills as they accumulated. The stores are on a cash basis, most of them. It makes it pretty hard for some people to get along. Even though they may have land and machinery and assets above liabilities, they can not get money. I had to borrow a little money myself this fall, and I had to go to several banks before I could find a bank from which I could borrow money.

"And these deplorable conditions, with most of the State covered with land mortgages, and all of the horses and machinery mortgaged, everything mortgaged, with money borrowed at the rate of 10 per cent as a rule, I don't suppose that even a bill of this kind would have put those people into a position where they could get back onto their feet without some other assistance, without the prices of their farm products that they raise on the farm, the wheat, etc., came up in value."

Page 77, P. E. Miller, Department of Agriculture, University of Minnesota, "I went myself up into three typical counties of the Red River Valley a few weeks ago and got some information along this line. I was accompanied by a man who was familiar with the State banking department, and together we went into 24 typical banks and went over the conditions with the banker himself, and out of those 24 country banks 11 can not loan a dollar at the present time, because of their condition. Eight of those banks said they could loan a very small amount for a very short time. . . . One of those banks would loan a small amount of money on first mortgage security. . . . One said he could loan some money, but because of the uneasy condition they were not loaning a bit of money, and three out of the 24 said they could take care of all reasonable requests for money.

Then we went into those banks' files and we took out the clients of the banks at random, to get a cross-section of the farmers tributary to those banks. We took out 186 clients of the banks, and those men were classified as credit risks, and out of 186, 129, or 69 per cent, were considered good banking risks. . . . Forty-four of those 186 farm owners, or 24 per cent, were classified as class B risks. . . . Their obligations were so heavy that it was a question

whether any additional financial assistance would help them pull through. Seven per cent, or 13 out of the total number, were considered as class C, in such financial condition that in all probability they were going to go under.

"The significant thing is that out of the 129 or 69 per cent of class A risks, 62 were in territory where they could not borrow a dollar; 37 were in a limited loan territory where they could get very small loans of not very much use to them; 30 of the total number were in territory where they could borrow upon reasonable request.

"We then took 69 tenants from these same bankers' files and classified them, and 55 per cent of them were class A, 32 per cent class B, and 13 per cent class C from the standpoint of credit risks.

"We then put them all together and we went over the farmers' financial condition for the last year, first with the banker, who knows the financial condition of almost every farmer in his territory, and later with the farmers themselves, and out of the total number in the past year 5 per cent had gone ahead a little bit, said they had made a little money, 20 per cent had come out just about even, in other words, had not gone behind, while 75 per cent had lost money and had been losing money for the past three or four years."

Page 145, J. A. Powers, Lenard, North Dakota, "The fact that for four years the dollar of our wheat farmer and our small-grain farmer and our cattlemen, more particularly the range cattlemen, the producer and not the feeder, has been around 60 cents, has created a situation which is reflected very largely in the failures of the 200 or more banks in the state. The failures of these banks have cut off all credit relations or any financial institutions of five or six thousand farmers. These men can not obtain any other connection at the present time.

"The banking condition there is so bad that every banker thinks that he can not in any way take on new territory, and in fact he can not, at the present time, take care of the needs of his own immediate locality. The situation, while it has been accumulative in a way, has been very much accentuated since the returns of the 1923 crop.

"A few of the banks are in very good shape, but they are making no loans on account of the desire to conserve their cash resources, not knowing when something might happen, and even

TABLE LV—WHOLESALE PRICES OF WINTER WHEAT—CIVIL WAR AND WORLD WAR

Winter Wheat in New York City*			No. 2 Hard Winter Wheat, New York City, f. o. b. Afloat†		
Year	Price per Bushel	Index Number	Year	Price per Bushel	Index Number
Average, October, 1856, to July, 1861:			Average, 1910 to 1914:		
January.....	\$1.372	100	January.....	\$1.09	100
April.....	1.437	100	April.....	1.08	100
July.....	1.442	100	July.....	1.03	100
October.....	1.299	100	October.....	1.05	100
1861: October.....	1.32	102	1915: January.....	1.52	139
1862: January.....	1.43	104	April.....	1.67	155
April.....	1.345	94	July.....	1.36	132
July.....	1.19	83	October.....	1.24	118
October.....	1.285	99	1916: January.....	1.40	128
1863: January.....	1.485	108	April.....	1.29	119
April.....	1.725	120	July.....	1.26	122
July.....	1.4925	104	October.....	1.84	175
October.....	1.36	105	1917: January.....	2.09	192
1864: January.....	1.61	117	April.....	2.63	244
April.....	1.74	121	July.....	2.44	237
July.....	2.6275	182	October.....	2.64	251
October.....	1.975	152	1918: January.....	2.26	207
1865: January.....	2.555	186	April.....	2.26	209
April.....	1.85	129	July.....	2.31	224
July.....	1.475	102	October.....	2.38	227
October.....	2.30	177	1919: January.....	2.38	218
1866: January.....	2.05	149	April.....	2.38	220
April.....	1.95	136	July.....	2.38	231
July.....	2.45	170	October.....	2.38	227
October.....	2.75	212	1920: January.....	2.37	217
1867: January.....	3.10	226	April.....	3.02	280
April.....	3.175	221	July.....	2.92	283
July.....	2.40	166	October.....	2.33	222
October.....	2.70	208	1921: January.....	2.00	183
1868: January.....	2.70	197	April.....	1.59	147
April.....	2.725	190	July.....	1.46	142
July.....	2.30	160	October.....	1.20	114
October.....	2.125	164	1922: January.....	1.23	113
1869: January.....	1.85	135	April.....	1.51	140
April.....			July.....	1.32	128
July.....	1.445	100	October.....	1.33	127
October.....	1.415	109	1923: January.....	1.32	121
1870: January.....	1.285	94	April.....	1.37	127
April.....	1.225	85	July.....	1.16	113
July.....	1.42	98	October.....	1.22	116
October.....	1.30	100			
1871: January.....	1.48	108			
April.....	1.68	117			
July.....	1.55	107			
October.....	1.67	129			
1872: January.....	1.58	115			
April.....	1.70	118			
July.....	1.65	114			
October.....	1.56	120			
1873: January.....	1.925	140			
April.....	1.925	134			
July.....	1.575	109			
October.....	1.615	124			
1874: January.....	1.665	121			
April.....	1.615	112			
July.....	1.40	97			
October.....	1.175	90			
1875: January.....	1.285	94			
April.....	1.29	90			
July.....	1.355	94			
October.....	1.375	106			
1876: January.....	1.375	100			
April.....	1.41	98			
July.....	1.30	90			
October.....	1.305	100			
1877: January.....	1.485	108			
April.....	1.65	115			
July.....	1.95	135			
October.....	1.45	112			
1878: January.....	1.42	103			
April.....	1.36	95			
July.....	1.16	80			
October.....	1.05375	84			
1879: January.....	1.08625	79			
April.....	1.1425	80			
July.....	1.1675	81			
October.....	1.2825	99			
1880: January.....	1.5825	115			
April.....	1.37875	96			
July.....	1.1625	81			
October.....	1.0875	84			

* Wholesale prices, wages, and transportation
Report by Mr. Aldrich from the Committee on
Finance, March 3, 1893. Senate Report No. 1394,
Fifty-second Congress, second session, Part II

†As reported by the United States Department of Agriculture.

though they are able to make loans, they are not doing it, from a strictly banking situation."

World War and Civil War prices of wheat.—Wheat rose less

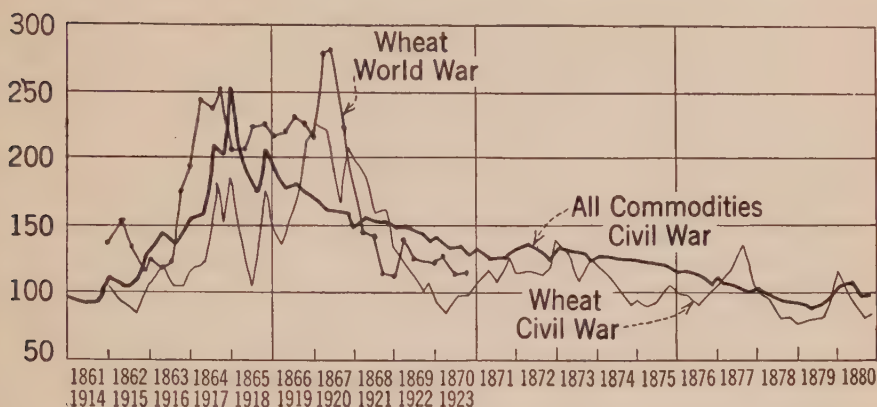


FIG. 45.—Prices of wheat for the World War and Civil War periods. Both the rise and the fall were much greater for the World War than for the Civil War.

rapidly during the Civil War than during the World War. Following the Civil War, wheat was somewhat below the general level of prices for some years. Apparently this history is being repeated.

CHAPTER XII

COTTON

Prices.—The five-year average farm price of cotton for November from 1909 to 1913 was 12.1 cents per pound. In 1914 the cotton crop was very large, 16 million bales. The outbreak of the war temporarily decreased the demand, and the farm price in November fell to 6.3 cents, little more than one-half of the pre-war average. Cotton was so cheap that a movement was started to get everyone

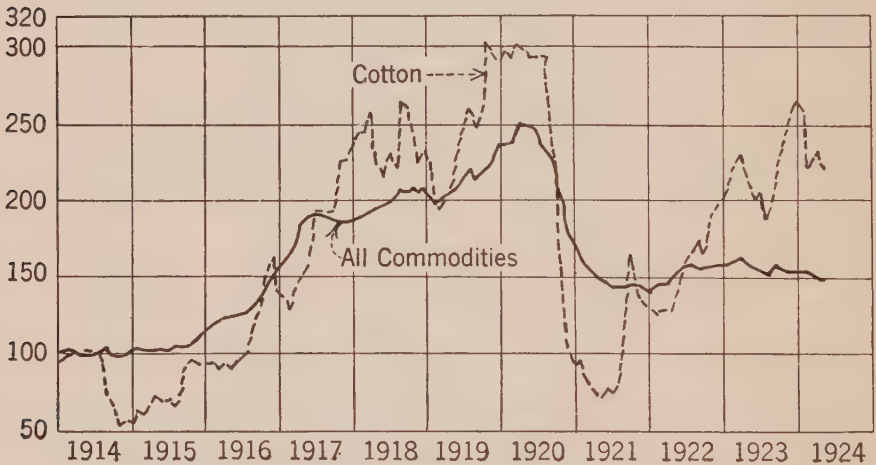


FIG. 46.—Prices paid to farmers for cotton, and wholesale prices of all commodities. Cotton prices are strongly affected by industrial conditions and by the size of the crop. Prices received for the crops of 1914 and 1920 were doubly depressed, because production was high and industrial conditions were unfavorable.

to “buy a bale.” A few years later when the demand was very high, and the boll weevil very active, only a few persons were rich enough to “buy a bale.” Again in 1920 no one seemed to want a bale. The farm price of cotton by months is given in Table LVI.

Index numbers of cotton prices.—The index numbers for cotton with the five years, 1909 to 1913 as 100, are given in Table LVII.

For the other farm products, the five-year average for each month from 1910 to 1914 is used as a base; but since the price of cotton dropped so much in 1914, the average for the period from August, 1909 to July, 1914, is used as a base.

The November, 1914, farm price of cotton was 52 per cent of the pre-war average. Prices did not reach the pre-war basis until the summer of 1916. Two crops were sold below pre-war prices. For four years, 1916 to 1919, cotton sold at much more than pre-war prices. The farm price in November, 1919, was over three times the pre-war level. The demand for cotton is very sensitive to industrial conditions. When the panic began in 1920, the demand fell rapidly. The crop of 1920 was large, 13 million bales, and the price was therefore doubly depressed. In May, 1920, cotton was 37.7 cents per pound, and one year later it was 9.4 cents. The index numbers were respectively 299 and 75.

TABLE LVI

PRICES PAID TO PRODUCERS FOR COTTON IN THE UNITED STATES

Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	12.3	12.2	12.4	12.4	12.6	12.7	12.7	12.5	12.2	12.1	12.1	12.2	12.4
1910	14.6	14.0	14.0	14.1	14.0	14.2	13.9	14.3	14.4	13.3	14.0	14.1	14.1
1911	14.4	14.3	13.9	13.9	14.2	14.6	14.4	13.2	11.8	10.2	8.9	8.8	12.7
1912	8.4	9.0	9.8	10.1	10.9	11.0	11.2	12.0	11.3	11.2	10.9	11.9	10.6
1913	12.2	11.9	11.8	11.8	11.6	11.5	11.6	11.5	11.8	13.3	13.0	12.2	12.0
1914	11.7	11.9	12.6	11.9	12.2	12.4	12.4	12.4	8.7	7.8	6.3	6.8	10.6
1915	6.6	7.4	7.4	8.1	9.1	8.6	8.6	8.1	8.5	11.2	11.6	11.3	8.9
1916	11.4	11.5	11.1	11.5	11.5	12.2	12.5	12.6	14.6	15.5	18.0	19.6	13.5
1917	17.1	16.8	15.9	18.0	18.9	20.2	24.7	24.3	23.4	23.3	27.3	27.7	21.5
1918	28.9	29.7	30.2	31.8	28.5	27.4	28.6	27.8	32.2	31.8	29.3	27.6	29.5
1919	28.7	24.9	24.0	24.5	26.0	29.5	31.1	32.5	30.3	31.3	36.5	35.6	29.6
1920	35.9	36.2	36.2	37.3	37.7	37.2	37.4	36.8	31.1	25.5	19.4	13.9	32.1
1921	11.5	11.8	10.3	9.4	9.4	9.8	9.6	9.8	12.6	19.8	17.7	16.2	12.3
1922	16.3	15.5	15.9	16.0	15.9	18.7	20.4	20.7	21.1	20.0	22.4	23.8	18.9
1923	24.5	25.9	27.7	28.4	26.9	25.6	26.2	23.5	24.1	27.2	28.8	31.0	26.7
1924	32.5	31.4	27.7	28.7	28.1	27.8	27.3	27.8	22.2				

Prices of cotton began to rise in the summer of 1921, and the cotton crops harvested in 1921 and 1922 sold at very good prices, so that on the whole the South was prosperous. However, the

prosperity of the cotton country was much less marked than the prices would indicate and the prosperity was uneven. In many parts of the South the boll weevil damaged the crop to such an extent that there was little cotton to sell.

TABLE LVII

INDEX NUMBERS OF PRICES PAID TO PRODUCERS OF COTTON IN THE UNITED STATES

Corresponding Months, August, 1909–July 1914=100, Calculated from Table LVI

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1909	.....	.....	.....	.....	.....	.....	.....	90	96	104	113	114	
1910	119	115	113	114	111	112	109	114	118	110	116	116	114
1911	117	117	112	112	113	115	113	106	97	84	74	72	102
1912	68	74	79	81	87	87	88	96	93	93	90	98	85
1913	99	98	95	95	92	91	91	92	97	110	107	100	97
1914	95	98	102	96	97	98	98	99	71	64	52	56	85
1915	54	61	60	65	72	68	68	65	70	93	96	93	72
1916	93	94	90	93	91	96	98	101	120	128	149	161	109
1917	139	138	128	145	150	159	194	194	192	193	226	227	173
1918	235	243	244	256	226	216	225	222	264	263	242	226	238
1919	233	204	194	198	206	232	245	260	248	259	302	293	239
1920	292	297	292	301	299	293	294	294	255	211	160	115	259
1921	93	97	83	76	75	77	76	78	103	164	146	133	100
1922	133	127	128	129	126	147	161	166	173	165	185	195	152
1923	199	212	223	229	213	202	206	188	198	225	238	254	215
1924	264	257	223	231	223	219	215	222	182				

Purchasing power of cotton.—The farmer is interested in the price of cotton per pound in so far as he uses the money to pay taxes, interest, and debts. He is interested in the price of cotton compared with the prices of other things, in so far as he uses the money to buy other things. He is also concerned with the quantity available for sale. In a year of low crop yields, prosperity is less than prices indicate, and in a year of good yields prosperity is greater than prices indicate. The purchasing power of cotton per pound and per acre are shown in Fig. 47. If the product of an average acre of the cotton crop of 1920 had been sold to buy other commodities, the quantity that could have been purchased was less than for any other year except 1894. Other strikingly disastrous years were 1893 and 1914.

In December, 1923, a pound of cotton at farm prices had a purchasing power of 186, but the average acre of cotton had a

purchasing power of only 127 per cent. The farmer is concerned with both yield and price, and is primarily interested in the purchasing power per acre. In some large areas, the yield was so low that the purchasing power was below normal. For other areas, such as Texas and North Carolina, the crop was fairly good, and the purchasing power was high.

Purchasing power of cotton in different states.—In December, 1923, the average farm price of cotton in the United States was 31 cents per pound. If the five-year average before the war is 100, this price would be represented by 254. Since the index number for wholesale prices of all commodities was 154, cotton prices had

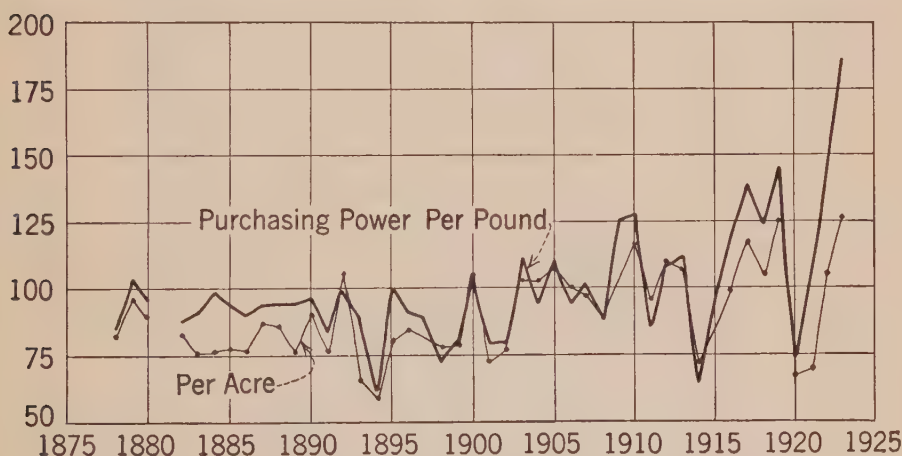


FIG. 47.—Purchasing power of cotton per pound and per acre. The most disastrous years were 1893, 1894, 1914, 1920, and 1921.

a purchasing power of 165. A bale of cotton would buy 65 per cent more than it would have bought before the war. The city man sees the price of cotton and judges the prosperity of the Southern farmer accordingly. For any district that had a normal yield this was a very profitable price.

The real test of the success of the crop is not price per pound but purchasing power per acre. Table LIX shows the purchasing power of cotton per acre for the nine important cotton states. In North Carolina, the yield was 15 per cent above normal and the price was 150 per cent above. The yield was so large and the price was so good that the purchasing power of cotton was 187. The state was highly prosperous; so prosperous that the farmers in

TABLE LVIII

FARM PRICE AND PURCHASING POWER OF COTTON IN THE UNITED STATES
AT DECEMBER 1 PRICES *

Year	Price per Pound in Cur- rency	Pur- chasing Power per Pound, 1910-14 = 100	Value per Acre Har- vested in Cur- rency	Pur- chasing Power per Acre Har- vested, 1910-14 = 100	Year	Price per Pound in Cur- rency	Pur- chasing Power per Pound, 1910-14 = 100	Value per Acre Har- vested in Cur- rency	Pur- chasing Power per Acre Har- vested, 1910-14 = 100
	Cents					Cents			
1876	9.7	87	\$16.14	74	1901	7.0	79	\$12.48	72
1878	8.2	85	15.62	82	1902	7.6	80	14.86	78
1879	10.3	104	18.60	96	1903	10.5	111	19.10	103
1880	9.8	96	18.12	89	1904	9.0	94	19.33	103
1882	9.1	88	16.93	83	1905	10.8	110	21.02	109
1883	9.1	91	14.96	76	1906	9.6	94	20.26	100
1884	9.2	99	14.14	77	1907	10.4	102	19.39	97
1885	8.4	94	13.76	78	1908	8.7	87	17.73	89
1886	8.1	90	13.65	77	1909	13.9	125	22.55	103
1887	8.5	94	15.61	87	1910	14.1	128	25.32	117
1888	8.5	94	15.33	86	1911	8.8	85	19.08	95
1889	8.5	94	13.64	76	1912	11.9	108	23.83	110
1890	8.6	96	16.06	90	1913	12.2	112	23.26	108
1891	7.2	84	12.99	76	1914	6.8	64	14.91	71
1892	8.3	99	17.42	105	1915	11.3	95	20.10	85
1893	7.0	87	10.50	65	1916	19.6	119	32.08	99
1894	4.6	61	8.96	59	1917	27.7	138	46.28	117
1895	7.6	100	11.82	80	1918	27.6	124	46.20	105
1896	6.7	91	12.30	85	1919	35.6	145	60.62	125
1897	6.7	89	12.20	81	1920	13.9	70	26.02	67
1898	5.7	72	12.63	78	1921	16.2	105	21.11	69
1899	7.0	81	13.41	79	1922	23.8	138	35.17	104
1900	9.2	104	18.58	106	1923	31.0	186	41.78	127

* Prices as reported by the Department of Agriculture are converted to currency basis during the Civil War period by using the premium on gold as reported by the Treasury Department. Purchasing power is calculated by dividing the price index by the index numbers of prices of all commodities for December, Table XXXI. Before 1900 the index numbers are not available for December. The average for the year and following years is then used.

that state were as oblivious of the farm depression in other states as were the city dwellers. Like the cities, this entire state had a construction boom of public and private improvements. The purchasing power per acre in Texas was 151, South Carolina 136, and Louisiana 131. The year, 1923, was a prosperous year for each of these states.

At the same time that cotton was profitable in Texas hogs had a purchasing power of 66. The results are shown by the following statement made by the crop statistician for Texas: "A great many producers are going out of the hog-raising business, due to dissatisfaction with prices received and the high price and scarcity of corn. It is expected that there will be little interest shown in this industry so long as the price of cotton remains good, as corn land will be put into cotton. The packers find difficulty in securing a sufficient number of hogs within the state and are shipping in from outside. It is felt that there are fewer hogs in the state than in many years."¹

TABLE LIX
YIELD, PRICE, AND PURCHASING POWER OF COTTON

State	Farm Price Dec. 1, 1909-13	Yield, 1909-13	Value per Acre, 1909-13	Farm Price Dec. 1, 1923	Yield, 1923	Value per Acre 1923	Index of Value of Cotton per Acre 1909-13 = 100	Purchasing Power per Acre
	Cents	Pounds		Cents	Pounds			
North Carolina..	12.3	252	\$31.00	30.8	290	\$89.32	288	187
Texas.....	11.8	162	19.12	30.4	146	44.38	232	151
South Carolina...	12.4	230	28.52	32.0	187	59.84	210	136
Louisiana.....	12.0	157	18.84	30.3	125	37.88	201	131
Oklahoma.....	11.4	164	18.70	29.6	90	26.64	142	92
Arkansas.....	12.2	183	22.33	31.9	97	30.94	139	90
Alabama.....	12.4	174	21.58	31.8	91	28.94	134	87
Mississippi.....	12.6	178	22.43	32.5	89	28.93	129	84
Georgia.....	12.5	193	24.13	32.0	82	26.24	109	71

For the four remaining cotton states,—Georgia, Mississippi, Alabama, and Oklahoma, the purchasing power in 1923 was less than before the war. In Georgia, it was only 71 per cent of the pre-war average. Despite the high price, the product of an acre of cotton in that state could not be exchanged for the usual amount of other things. It is interesting to note that of all the southern states, Georgia was most concerned with the migration of negroes to northern states.

Writing of the situation in Georgia in the spring of 1924, Mr. Petit stated that: "Approximately one-fifth of the farm labor has left the section or gone into public works during the twelve months ending February 15th. The farmers report that a few of the Negroes are returning, but that many more farm hands will leave as soon as the cold weather is over.

¹ Agricultural Situation, vol. V, No. 4, p. 25, April 1, 1924.

"More than two-thirds of the State is in extremely bad shape. Last fall correspondents reported between 10 and 12 per cent of the farmers were quitting for good. While this was probably exaggerated, it is a good index of the situation.

"The disaster which overtook the cotton crop last season, together with the migration of farm labor, has resulted in a very great change in the agriculture of the State. Between 2,500,000 and 3,000,000 acres of land have gone out of cultivation, and more will be idle this season than ever before.

"A large portion of the State has been dependent on the sale

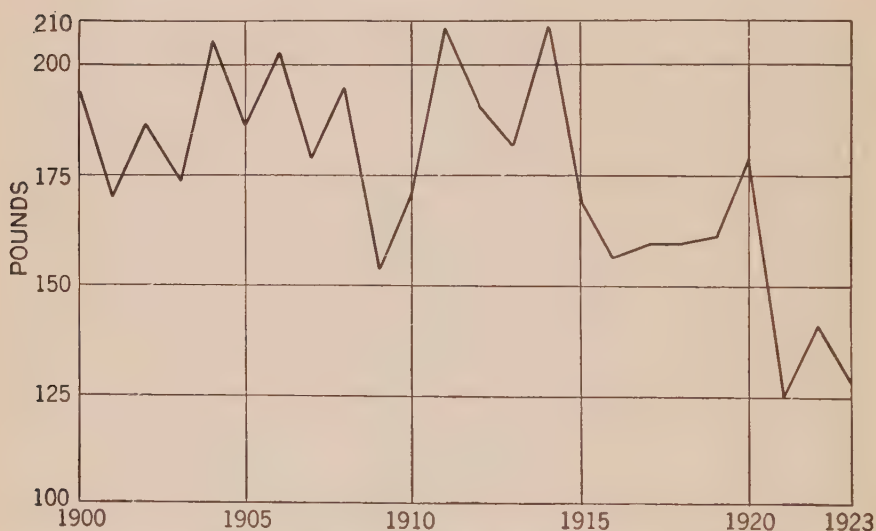


FIG. 48.—Yield of cotton per acre. The yields are exceedingly variable, due to insects and weather.

of timber, and an astonishing amount of lumber has been cut. The volume of the money received has been great enough, in many instances, to offset the decrease in the crops produced. However, the timber supply is very nearly gone. Another year will see the exhaustion of most of this farm timber."²

Cotton prices and industrial conditions.—There is a strong tendency for cotton prices to rise during periods of industrial prosperity. When employment conditions are good and wages high, the choicer kinds of food, such as meat, are more in demand. If

² The Agricultural Situation, Vol. V, No. 4, p. 15, Apr., 1924.

these conditions continue long enough, there is also an increased demand for clothing.

Using prices for industrial stocks as a measure of business conditions, the price of cotton tends to lag about thirteen months. That is, the peak of cotton prices is likely to come about a year after the peak in the stock market.

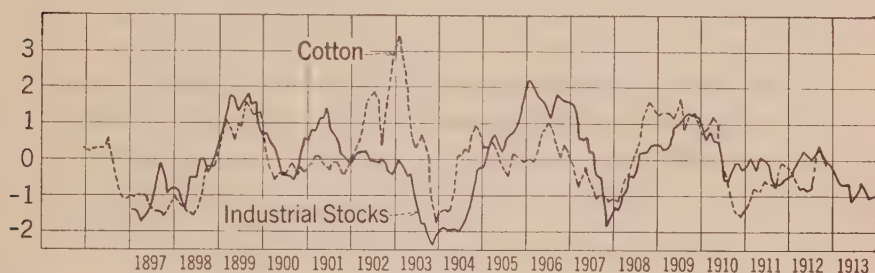


FIG. 49.—Cycles of prices of industrial stocks from 1897 to 1913, and prices of cotton 13 months later. Cotton prices tend to follow the stock market with a lag of about 13 months, due to the fact that industrial conditions are usually good at that time.

TABLE LX
PRICES OF COTTON FOLLOWING THREE WARS

Napoleonic War		Civil War		World War	
Date	Price, Cents	Date	Price, Cents	Date	Price, Cents
May, 1818.....	33.2	August, 1864.....	177.7	April, 1920.....	42.3
May, 1819.....	15.3	April, 1865.....	39.4	March, 1921.....	11.7

Cotton prices during other wars.—Following the Napoleonic Wars there was a period when wages were very high, there was full employment, and cotton was in great demand. In May, 1818, it sold for 33 cents per pound in New York. A year later it sold for 15 cents per pound.

This is similar to the World War experience. In April, 1920, cotton sold for 42 cents per pound. The following March it was 12 cents. With full employment at high wages in 1923 it rose very high. When the next period of severe unemployment occurs probably it will be very cheap.

CHAPTER XIII

POTATOES

Price of potatoes.—The potato crop in 1916 was very poor, the average yield per acre in the United States was 80.5 bushels, the lowest yield in twenty-five years. The situation was little appreciated and potatoes did not advance sufficiently to make the supply last throughout the year. Prices advanced until the average farm

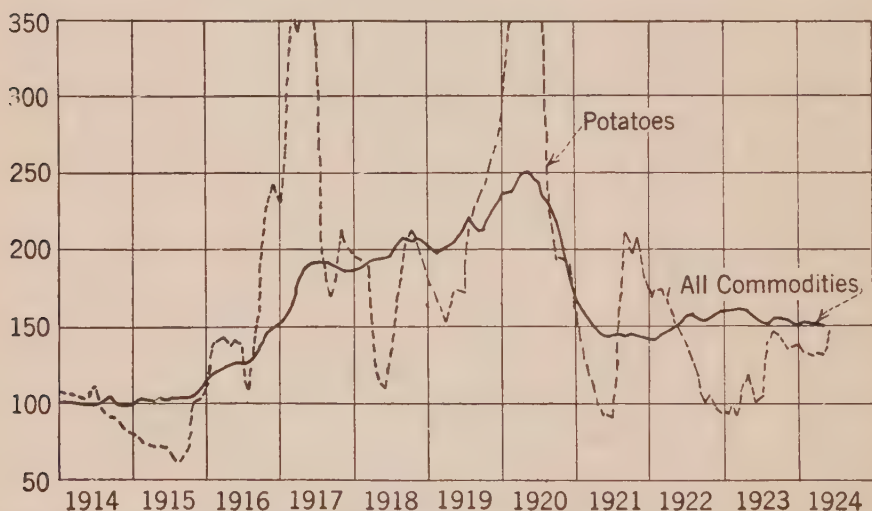


FIG. 50.—Prices paid to farmers for potatoes, and wholesale prices of all commodities. Potatoes are always such cheap food that they tend to be consumed in as great an amount as the appetite suggests. This makes the demand very inelastic, and prices fluctuate violently, depending on supply.

price was \$2.80 in May of the following year. The newspapers were full of radical editorials accusing farmers of hoarding potatoes. A census taken in New York State instead of showing that they had hoarded potatoes showed that they had sold so many that they did not have enough left for seed. The State Food Commission imported potatoes from other states for seed purposes. Much

valuable newspaper space was given to urging every citizen to plant potatoes. Many patriotic owners of country estates, and some colleges plowed up their lawns to plant potatoes in order to set a good example.

The acreage of potatoes was increased 23 per cent. It was the largest acreage ever planted in America. Apparently even Providence took an interest in the potato question for the yield per acre was 20 bushels greater than for the preceding year. Naturally the price declined. In 1918 the crop was again large. Two years of low prices resulted in a reduced acreage. The yield per acre in 1919 was also low. Once more prices advanced, reaching \$4.21 per bushel in June, 1920. The yield per acre in 1920 was very high. This, together with the increased acreage and financial deflation brought disastrous prices for potatoes.

TABLE LXI

PRICES PAID TO PRODUCERS FOR POTATOES IN THE UNITED STATES

Cents per Bushel

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	62.7	65.7	66.9	68.1	69.6	69.4	74.3	88.7	80.4	69.2	60.0	60.7	69.6
1910	56.0	56.2	54.6	47.4	38.4	37.4	40.1	64.9	72.9	67.8	55.7	55.7	53.9
1911	54.1	55.1	55.3	55.5	62.5	63.3	96.3	136.0	113.7	88.3	76.3	79.9	78.0
1912	84.5	94.4	102.0	117.1	127.3	119.7	103.6	86.5	65.0	51.1	45.5	50.5	87.3
1913	50.6	53.1	52.0	50.3	48.2	55.2	49.8	69.2	75.3	73.9	69.6	68.7	59.7
1914	68.4	69.7	70.7	70.0	71.4	71.3	81.5	87.1	74.9	64.7	52.8	48.7	69.3
1915	49.7	50.4	50.4	47.8	50.5	50.8	52.1	56.3	50.5	48.8	60.8	61.7	52.5
1916	70.6	88.0	94.4	97.6	94.8	98.8	102.3	95.4	109.3	112.0	135.7	146.1	103.8
1917	147.3	172.4	240.7	234.7	279.6	274.0	247.9	170.8	139.1	122.1	127.8	122.8	189.9
1918	121.0	122.9	120.3	92.6	80.1	75.5	94.9	141.6	148.8	143.6	127.2	119.3	115.7
1919	116.1	114.4	109.4	105.4	118.9	121.4	128.4	192.8	187.5	164.2	152.8	159.5	139.4
1920	178.6	217.6	243.5	295.6	393.6	421.3	386.0	302.9	184.9	134.8	118.3	114.5	249.5
1921	105.6	95.6	84.0	77.8	68.0	67.1	69.9	136.9	168.6	137.6	123.5	111.1	103.8
1922	108.6	115.5	117.8	113.6	104.3	104.1	103.3	114.8	88.0	69.6	62.8	58.2	96.7
1923	59.3	64.7	63.6	73.6	81.3	76.6	83.1	122.7	119.0	100.2	82.7	82.3	84.1
1924	86.4	88.1	87.8	91.1	91.3	100.7	109.0	111.3	81.0				

Potatoes in North Dakota and Colorado.—In 1920 an acre of potatoes in North Dakota had a purchasing power of 91. An acre of wheat had a purchasing power of only 74. In 1921 an acre of potatoes had a purchasing power of 101, or potatoes were equal to their pre-war value when exchanged for general commodities. Wheat had a purchasing power per acre of only 59. The low returns from wheat and normal returns from potatoes resulted in a great

expansion of potatoes. The area in North Dakota in 1920 was 83,000 acres. This was increased to 124,000 acres in 1921 and to 210,000 in 1922. In Colorado the acreage increased from 73,000 in 1920 to 142,000 in 1922.

In 1922, the total acreage planted in the United States was more than enough and the yield was good. Potatoes sold as low as 15 cents per bushel in North Dakota. The December 1 farm price for the entire state was 31 cents.

Like the usual results when shifts are made from a major to a minor crop, the large increase in the acreage of the minor crops

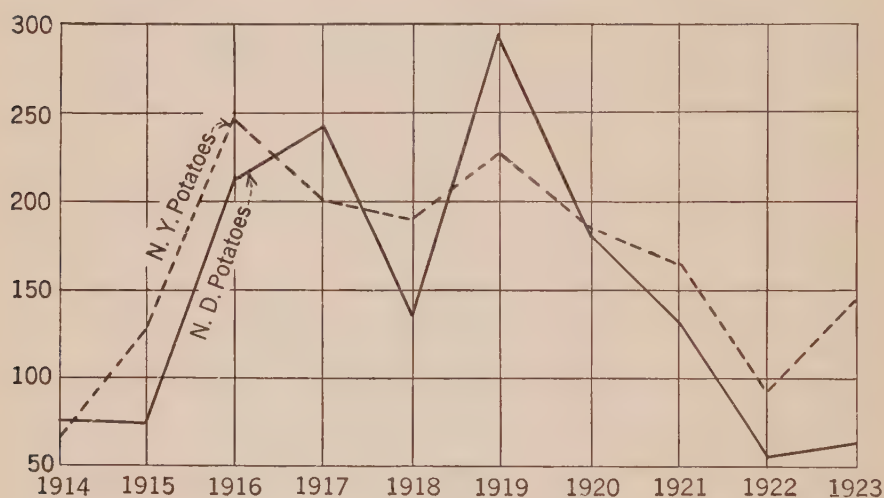


FIG. 51.—Prices paid to farmers for potatoes in New York and in North Dakota. Prices of potatoes in any state depend on the local supply, as well as on the total American crop.

demoralized the prices for it without materially affecting the acreage of the major crop. North Dakota more than doubled its potato acreage, but if the increase had been subtracted from the acreage in wheat it would have reduced the wheat acreage of that state by only a little over 1 per cent.

Effect of local yield on price.—In 1916 the yield of potatoes in New York was 70 per cent of 1910–14 average yield. Prices paid to farmers were 247 when the pre-war price is considered as 100. In Wisconsin the yield was 42 per cent of the average and the price index was 334. In the following year the index of yield in Wisconsin was 101 and the price index 205. North Dakota had

a poor crop. The yield index was 44 and the price index 241. In each of these cases the data show that the price is materially affected by the yield in that state, and is not solely dependent on the yield in the entire country. In 1919 the index of yield in Wis-

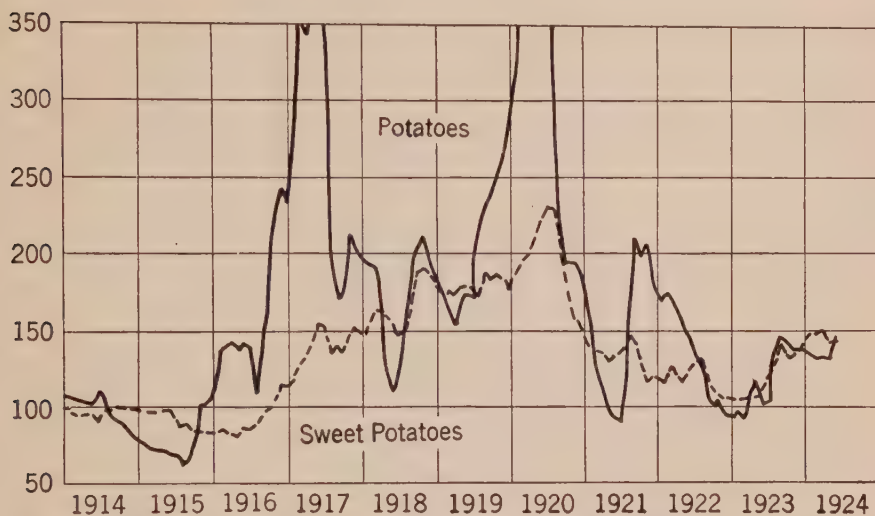


FIG. 52.—Prices paid to farmers for potatoes and for sweet potatoes. There is some tendency for the prices of these two crops to move together, but the relationship is far from exact.

consin was 83 and the price index was 318. In New York the yield index was 109 and the price index 227. In 1921 the differences were even more striking. In Wisconsin, the yield index was 60 and the price index was 216, while in New York the yield index was 103 and the price index 169.

TABLE LXII

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR POTATOES
IN THE UNITED STATES

Corresponding Months of 1910-14 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	89	86	82	70	55	54	54	73	91	98	93	92	77
1911	86	84	83	81	90	91	130	153	141	128	127	132	112
1912	135	144	152	172	183	172	139	98	81	74	76	83	125
1913	81	81	78	74	69	80	67	78	94	107	116	113	86
1914	109	106	106	103	103	103	110	98	93	93	88	80	100
1915	79	77	75	70	73	73	70	63	63	71	101	102	75
1916	113	134	141	143	136	142	138	108	136	162	226	241	149
1917	235	262	360	345	402	395	334	193	173	176	213	202	273
1918	193	187	180	136	115	109	128	160	185	208	212	197	166
1919	185	174	164	155	171	175	173	217	233	237	255	266	200
1920	285	331	364	434	566	607	520	341	230	195	197	192	358
1921	168	146	126	114	98	97	94	154	210	199	206	183	149
1922	173	176	176	167	150	150	139	129	109	101	105	96	139
1923	95	98	95	108	117	110	112	138	148	145	138	136	121
1924	138	134	131	134	131	145	147	125	101				

TABLE LXIII

PRODUCTION AND VALUE OF POTATOES

Year	Thousands of Acres			Yield, Bu. per Acre			Farm Price, Dec. 1 (Cents)			Value per Acre (Dollars)		
	North Dakota	Wis- consin	New York	North Dakota	Wis- consin	New York	North Dakota	Wis- consin	New York	North Dakota	Wis- consin	New York
1910-14	52	286	380	97	113	100	54	44	64	46.51	48.98	60.01
1910	35	260	438	41	95	102	91	38	48	37.31	36.10	48.96
1911	42	280	375	120	116	74	55	62	90	66.00	71.92	66.60
1912	52	291	360	128	120	106	28	34	58	35.84	40.80	61.48
1913	60	295	360	85	109	74	56	54	80	47.60	58.86	59.20
1914	70	304	367	109	124	145	42	30	44	45.78	37.20	63.80
1915	80	298	355	90	87	62	41	45	82	36.90	39.15	50.84
1916	75	290	320	93	47	70	115	147	158	106.95	69.09	110.60
1917	90	307	400	43	114	95	130	90	130	55.90	102.60	123.50
1918	90	295	380	99	110	98	73	80	122	72.27	89.60	112.24
1919	90	300	363	63	94	109	160	140	145	100.80	131.60	158.05
1920	83	308	325	79	108	125	98	86	118	77.42	92.88	147.50
1921	124	315	330	96	68	103	70	95	108	67.20	64.60	111.24
1922	210	328	340	90	124	110	31	33	60	27.90	40.92	66.00
1923	158	272	323	83	96	123	35	50	95	29.05	48.00	116.85

TABLE LXIV
INDEX NUMBERS OF PRODUCTION AND PRICES FOR POTATOES
1910-14=100

Year	Yield per Acre, 1910-14=100			Prices, 1910-14=100			Value per Acre, 1910-14=100			Purchasing Power per Acre, 1910-14=100		
	North Dakota	Wis- consin	New York	North Dakota	Wis- consin	New York	North Dakota	Wis- consin	New York	North Dakota	Wis- consin	New York
1910	42	84	102	169	86	75	80	74	82	78	73	80
1911	124	103	74	102	141	141	142	147	111	149	155	117
1912	132	106	106	52	77	91	77	83	102	75	81	100
1913	88	96	74	104	123	125	102	120	99	101	119	98
1914	112	110	145	78	68	69	98	76	106	99	77	107
1915	93	77	62	76	102	128	79	80	85	72	73	77
1916	96	42	70	213	334	247	230	141	184	151	93	121
1917	44	101	95	241	205	203	120	209	206	65	112	111
1918	102	97	98	135	182	191	155	183	187	75	89	91
1919	65	83	109	296	318	227	217	269	263	95	118	115
1920	81	96	125	181	195	184	166	190	246	91	104	134
1921	99	60	103	130	216	169	144	132	185	101	92	129
1922	93	110	110	57	75	94	60	84	110	38	53	69
1923	86	85	123	65	114	148	62	98	195	40	64	127

TABLE LXV
PRICES PAID TO PRODUCERS FOR SWEET POTATOES IN THE UNITED STATES
Cents per Bushel

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	78.5	83.4	87.5	93.1	97.8	95.9	91.8	96.7	93.3	85.0	76.3	72.2	87.6
1910	...	76.8	79.4	82.4	83.4	79.4	75.1	78.2	81.2	77.6	71.8	67.1	77.3
1911	75.0	80.4	84.4	91.2	99.3	98.7	99.0	105.8	102.6	91.8	90.9	75.5	90.4
1912	83.0	90.2	98.0	109.9	118.0	115.0	112.2	107.8	95.7	84.4	76.8	72.6	97.0
1913	80.4	85.4	88.9	92.6	93.8	92.0	90.1	94.1	94.3	83.9	75.7	72.6	87.0
1914	79.2	84.3	86.7	89.6	94.5	94.2	82.6	97.5	92.8	87.3	76.3	73.0	86.5
1915	79.0	82.0	84.7	90.7	95.6	96.7	88.9	85.8	84.6	72.7	63.7	62.1	82.2
1916	64.9	71.2	77.3	78.0	80.5	83.4	79.4	87.1	89.9	83.7	80.6	84.8	80.1
1917	90.1	95.8	110.7	124.0	141.3	149.4	140.5	129.3	132.6	116.1	111.2	110.8	121.0
1918	117.2	123.1	142.7	151.6	155.0	148.8	134.3	144.7	156.2	160.6	146.0	135.2	143.0
1919	142.1	143.1	153.7	160.7	174.6	173.7	159.8	167.9	175.4	154.7	143.9	134.4	156.9
1920	138.2	156.6	172.2	185.8	205.2	216.6	213.6	223.5	200.7	160.8	122.1	113.4	175.7
1921	113.0	117.8	119.8	127.4	127.2	128.8	125.0	144.1	135.6	108.3	89.5	88.1	118.7
1922	95.1	96.8	110.7	111.7	114.1	121.2	119.0	128.4	107.6	94.8	80.7	77.1	104.8
1923	82.9	87.3	92.3	98.6	103.8	105.8	114.0	123.3	133.7	111.6	102.2	97.9	104.4
1924	112.5	123.7	129.0	140.4	139.2	138.9	130.7	151.4	157.0				

TABLE LXVI

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR SWEET POTATOES
IN THE UNITED STATES

Corresponding Months of 1910-14 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	95	92	91	89	85	83	82	81	87	91	94	93	88
1911	96	96	96	98	102	103	108	109	110	108	106	105	103
1912	106	108	112	118	121	120	122	111	103	99	101	101	111
1913	102	102	102	99	96	96	98	97	101	99	99	101	99
1914	101	101	99	96	97	98	90	101	99	103	100	101	99
1915	101	98	97	97	98	101	97	89	91	86	83	86	94
1916	83	85	88	84	82	87	86	90	96	98	106	117	91
1917	115	115	127	133	144	156	153	134	142	137	146	153	138
1918	149	148	163	163	158	155	146	150	167	189	191	187	163
1919	181	172	176	173	179	181	174	174	188	182	189	185	179
1920	176	188	197	200	210	226	233	231	215	189	160	156	201
1921	144	141	137	137	130	134	136	149	145	127	117	122	136
1922	121	116	127	120	117	126	130	133	115	112	106	107	120
1923	106	105	105	106	106	110	124	128	143	131	134	136	119
1924	143	148	147	151	142	145	142	157	168				

CHAPTER XIV

CORN AND HOGS

Prices of corn.—For the five years 1910 to 1914 the United States farm price of corn averaged 64.8 cents per bushel. The price of corn gradually increased from 1915 until August, 1919, when the average farm price was \$1.91 per bushel. At that date hogs sold for \$19.30. The great decline in the price of corn began in August, 1920, and continued until November, 1921. In that month corn was worth only 65 per cent of the pre-war price. Since

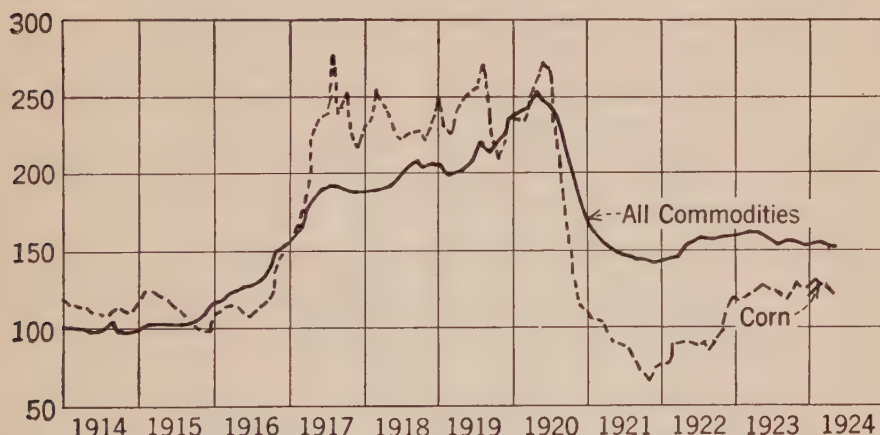


FIG. 53.—Prices paid to farmers for corn, and wholesale prices of all commodities. Corn rose very high during the war, but fell more than most commodities after the war.

the general price level in 1921 stood at 144, corn had a purchasing power of only 45 per cent of its pre-war average.

In the corn-surplus states, prices were even more disastrous. In Nebraska in December, 1921, the average farm price of corn was 27 cents; in Iowa it was 30 cents.

Prices of hogs.—During the five years before the war, hogs varied from \$5.72 to \$9.26, and averaged \$7.24 per hundred pounds. For 1915, hogs averaged \$6.59 and varied but little from this price.

Thereafter the price of hogs increased by leaps and bounds until they reached \$19.30 in August, 1919. In July, 1919, hogs sold as high as \$23.45 per hundred pounds in Chicago. This is the highest price ever recorded.

Prices of hogs then started on a spectacular decline which did not end until the United States farm price reached \$6.52 in December, 1921. Despite the small advance in 1922, prices continued to decline, and in December, 1923, sold for \$6.39.

In terms of the five-year pre-war price of hogs (\$7.24), the United States farm prices for the years 1914, 1915, and 1916, were about normal. Beginning in the fall of 1916 prices rose until in

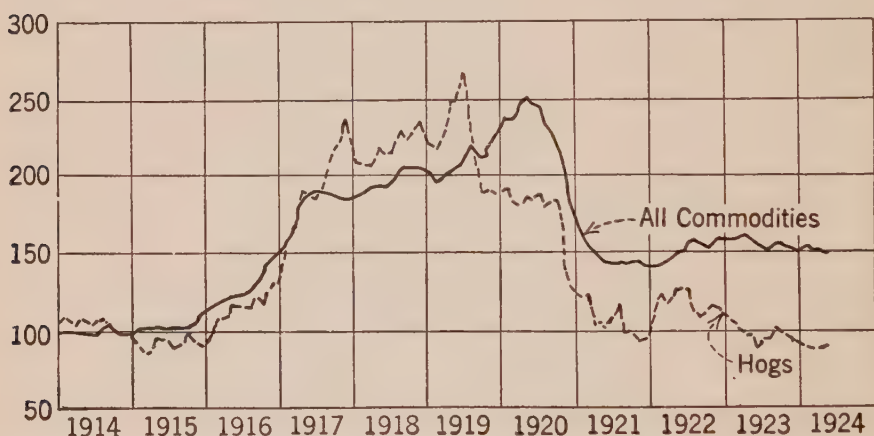


FIG. 54.—Prices paid to farmers for hogs, and wholesale prices of all commodities. After the high prices of the war period, hogs fell below pre-war prices.

July, 1919, hogs sold for 2.65 times the pre-war price. Thereafter they fell, and fell more rapidly than they had risen until they were but 88 per cent of the pre-war price in April, 1924.

Purchasing power of corn.—In Illinois, from 1917 to 1923, the yield of corn per acre was higher than the pre-war average. The purchasing power per acre was therefore higher than prices indicate. For the five years, 1915 to 1919, it averaged 116. For the four years, 1920 to 1923, it was 73 per cent of the pre-war average.

Yields per acre in Kansas are much more variable than in Illinois because of the greater variations in rainfall. In 1915 the yield of corn per acre was 31 bushels. The following year it was 10 bushels. The purchasing power per acre was 175 in 1915 and 72 in 1916. The crop yields for the panic years 1920 to 1923 were above the

average, so that the returns from corn were better than the prices indicate. The average purchasing power for this four-year period was 84 per cent of pre-war. For the same four-year period the purchasing power of wheat was only 64. This striking difference led to an increased interest in corn and diversified farming and to a decreased interest in wheat.

Purchasing power of corn and hogs in Iowa.—From 1916 to 1919, corn in Iowa had a purchasing power considerably above the pre-war average. In the three following years it was much below pre-war. In 1920 and 1921, the purchasing power of corn was less than one-half the pre-war, but hogs had a purchasing power of two-thirds the pre-war average. Although the price of hogs was

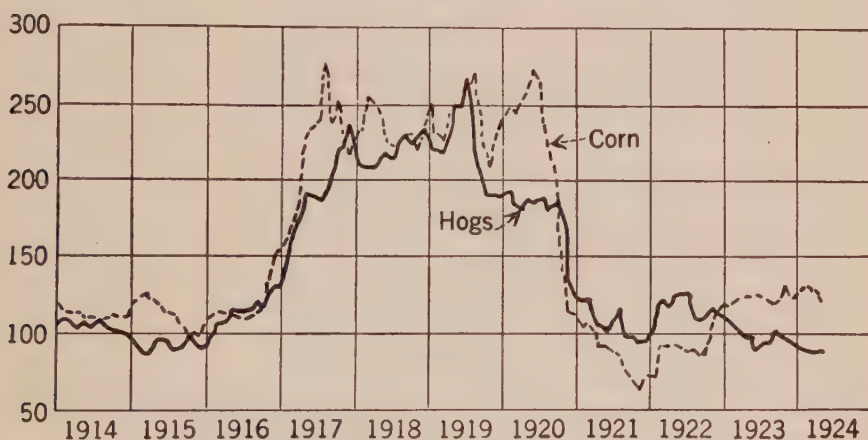


FIG. 55.—Prices paid to farmers for corn and for hogs.

very unfavorable, the price of corn was worse, and the corn-hog ratio was very high.

Purchasing power of hogs in terms of farm implements.—At present (July, 1924), hog producers are suffering more than wheat producers. The hog producer is feeding high-priced corn (42 per cent above pre-war) into cheap hogs (2 per cent above pre-war).

The farmer in 1923 had to sell twice as many pounds of pork to purchase a gang plow or grain drill as he did in 1913. To obtain a corn planter in 1913, he had to sell 443 pounds of pork, whereas in 1923 it took 1009 pounds.

Purchasing power of hogs in various states.—When prices rise rapidly freight rates and handling charges lag. Prices in the more

TABLE LXVII

PURCHASING POWER OF HOGS IN TERMS OF FARM IMPLEMENTS *

Machine	Cost		Pounds of Pork Needed		Index of Pork Needed, 1913 = 100
	1913	1923	1913	1923	
Gang plow, 14 inch.	\$53.25	\$99.00	744	1549	208
Corn planter, 2-row.	31.75	64.50	443	1009	228
Grain drill, 22-7.	106.00	190.00	1481	2973	201

* The McNary-Haugen Bill, Sixty-eighth Congress, first session, House of Representatives Report No. 631, p. 23, May 2, 1924.

distant states increase by a greater percentage than do prices in the states that are near market. The difference for hogs is less than for more bulky products. During the period of rising prices

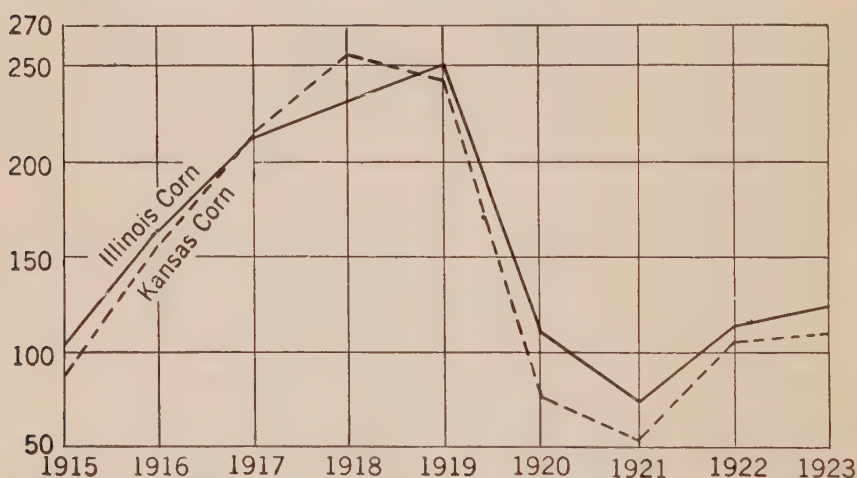


FIG. 56.—Prices paid to farmers for corn. When prices fell, the price in Kansas was lower, relative to pre-war, than were prices in Illinois.

the index numbers of prices of hogs in Nebraska rose slightly more than in Iowa and considerably more than in New York or Georgia. When the pre-war average is considered as 100, hogs in Nebraska in December, 1918, had a purchasing power of 121, or about one-fifth above normal. In New York the purchasing power was 108 and in Georgia it was 98. That is, the Georgia farmer could exchange a hog for about the normal quantity of goods at wholesale prices.

When prices fell, freight rates rose, and other handling charges remained high. There was a tendency for prices to fall more in the more distant states. The purchasing power of hogs in Nebraska in December, 1923, was 58, and in New York it was 73.

Cycles of high and low hog production.—Normally hogs rise in price for two to three years and then fall for about an equal length of time. For the period from 1867 to 1915 the average length of the rising price period was 33 months and the average period of

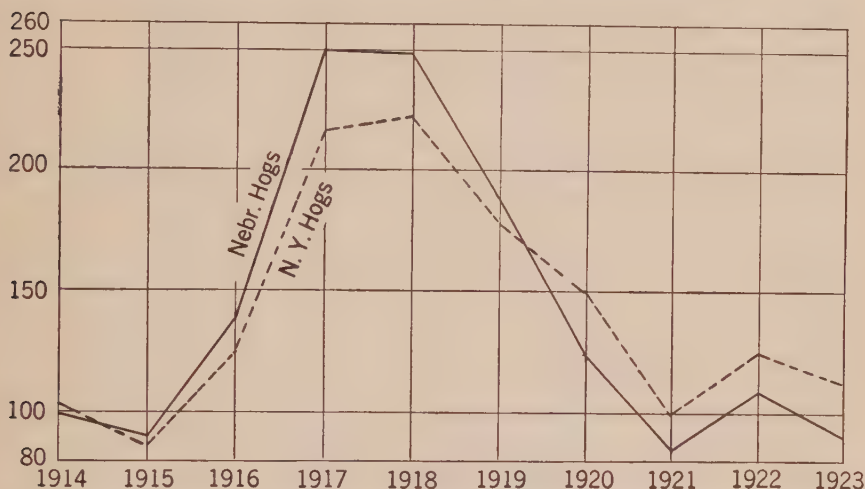


FIG. 57.—Prices paid to farmers for hogs. When prices were rising, they rose in Nebraska more than in New York. When prices fell, they fell more in Nebraska than in New York.

falling prices 31 months. The average swing in prices was about \$3 per hundred.

The primary reason for this cycle of approximately five years in length is that when hogs become profitable, there is a tendency to raise too many of them. When they fall in price, there is a tendency to raise too few. It takes about two years to over-expand the business, and about two years to contract it.

The effect of the weather on the yield of corn, and the effect of industrial conditions on the demand for pork both enter into the problem, so that periods of rising and falling prices vary considerably from the average length.

Farm prices of hogs are not available before 1910 except for values per head on January 1. These prices and purchasing power

TABLE LXVIII

CHANGES IN PRICES OF HOGS AT CHICAGO, APPROXIMATE CENTERS
OF HIGH AND LOW PRICE PERIODS

Date	Price	Months		Amount		Percentage	
		Up	Down	Up	Down	Rise	Fall
1862, April.....	\$2.50						
1865, September.....	10.50	41		\$8.00		320	
1867, July.....	6.00		22		\$4.50		43
1869, July.....	9.50	24		3.50		58	
1872, August.....	4.00		37		4.50		47
1875, October.....	7.75	38		3.75		94	
1878, December.....	3.50		38		4.25		55
1882, July.....	8.00	43		4.50		129	
1885, November.....	4.25		40		3.75		47
1888, April.....	5.75	29		1.50		35	
1890, November.....	3.75		31		2.00		35
1893, April.....	7.00	29		3.25		87	
1896, September.....	3.25		41		3.75		54
1902, February.....	7.00	65		3.75		115	
1904, December.....	4.75		34		2.25		32
1906, November.....	6.50	23		1.75		37	
1908, February.....	4.75		15		1.75		27
1910, February.....	9.00	24		4.25		89	
1911, September.....	6.25		19		2.75		31
1913, July.....	8.50	22		2.25		36	
1915, September.....	6.75		26		1.75		21
1918, November.....	18.50	38		11.75		174	
1921, December.....	7.25		37		11.25		61
Average.....		34	31			107	42
Average, 1867-1915.....		33	31	\$3.17	\$2.97	76	39

per head are shown in Table LXXIII and Fig. 58. These show the tendency to a five-year cycle,—about two to three years of rising prices followed by two to three years of falling prices.

Hog-corn ratio.—The average price of heavy hogs at Chicago for sixty-four years has been equal to the price of 11.6 bushels of No. 2 mixed corn at Chicago. The hog-corn ratio does not measure the profitableness of farming in the corn belt. It merely measures the relative profitableness of selling corn direct, or selling it in the form of hogs. For example, in 1922, the hog-corn ratio stood at 14.4, or 14.4 bushels of corn were worth as much as 100 pounds of hogs. Hogs were very high relative to corn. Farmers lost

heavily on corn production, but since the price of hogs was not so unfavorable as the price of corn, they greatly expanded the production of hogs in the hope of getting more for their corn.

Hog-corn ratios for Iowa.—For fourteen years at farm prices

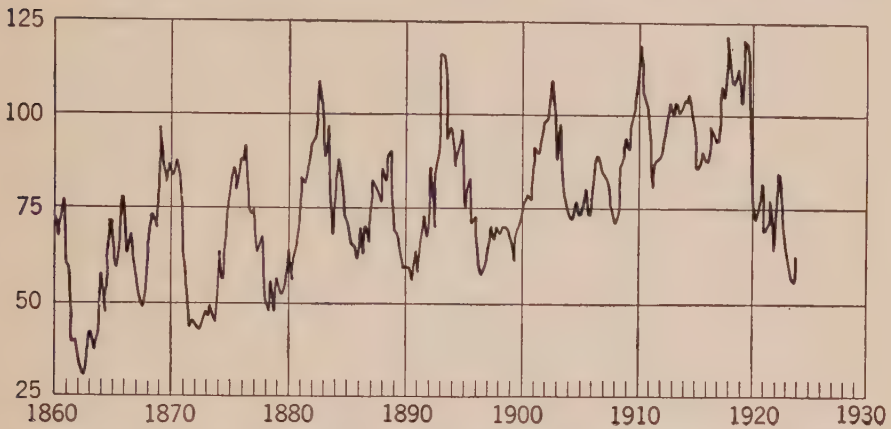


FIG. 58.—Purchasing power of hogs. Prices of hogs usually rise for about two to three years and fall for about the same length of time.



FIG. 59.—Civil War and World War prices of hogs. Hogs averaged somewhat lower than the level of general wholesale prices following the Civil War, but the dominating characteristic of prices was the usual cycles of over- and under-production.

in Iowa, 13.2 bushels of corn were worth as much as 100 pounds of hogs. The ratio is higher than at Chicago prices because it costs more to ship corn than to ship hogs. In 1921 and 1922, corn in Iowa was so cheap that 18 bushels of it were required to be as valuable as 100 pounds of hogs. This resulted in a great expansion

of hog production, and because the hogs ate so much corn, by November, 1923, it required only 8 bushels of corn to be as valuable as 100 pounds of hogs. This, in turn, stimulated the marketing and checked the production of hogs.

Civil War and World War prices of corn.—A violent drop in the price of corn came after each of the wars, but the drop following the World War was the more violent. In each case prices recovered after about two years. Following the Civil War the price of corn averaged somewhat lower than the average for all commodities for a number of years.

Civil War and World War prices of hogs.—In the early part of

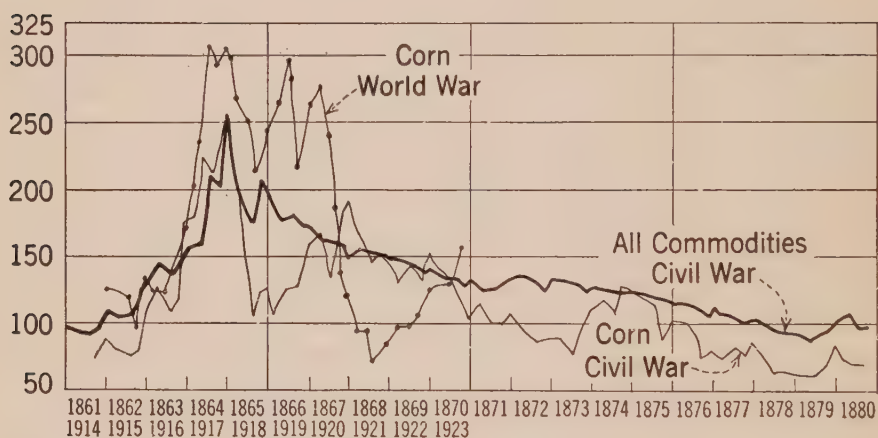


FIG. 60.—Civil War and World War prices of corn, and Civil War prices of all commodities.

the Civil War and again in the early part of the World War, hogs were lower than the general price level. In each case this was a period when prices rose faster than wages so that the demand for pork was curtailed. In each case it resulted in a shortage of hogs when wages rose so that there was a short supply and high demand. In each case the price rose very high. The high prices resulted in great over-production. Subsequent price history after the Civil War shows the cycles of over- and under-production of hogs. For many years the decline in hog prices averaged greater than the decline in the general price level.

Apparently the price of corn is largely controlled by the number of hogs, and the number of hogs is controlled by adjustment to the

price of corn. Few hogs means high-priced hogs and little corn fed. This usually means cheap corn. Cheap corn and high hogs, in turn, stimulate hog raising which later means too many hogs for the corn crop, and expensive corn.

Relation of prices of corn and hogs to industrial conditions.—

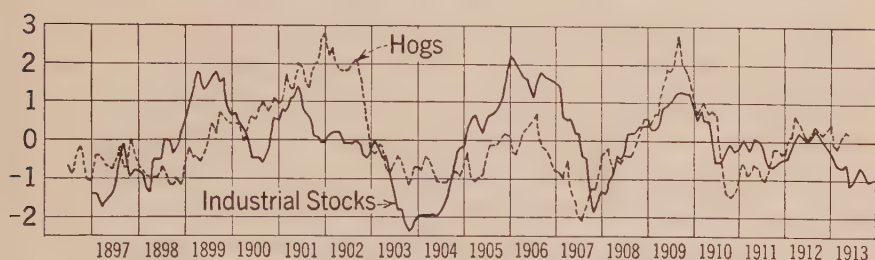


FIG. 61.—Cycles of high and low prices of industrial stocks and of heavy hogs at Chicago six months later. Industrial conditions have considerable influence on the price of hogs.

There is a tendency for pork to be high in price when there is full employment at high wages. The prices paid for industrial stocks are a good measure of industrial conditions. Prices of hogs tend to follow the stock market about six months. This is not because

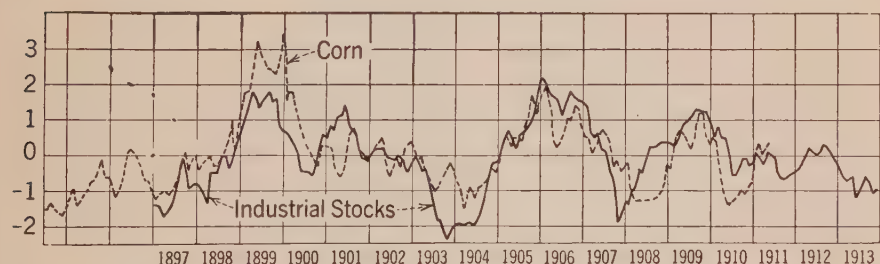


FIG. 62.—Cycles of high and low prices of industrial stocks and of contract corn at Chicago. For the 17 years, 1897 to 1913, corn prices tended to be high about 30 months after the prices of industrial stocks. ($r = +0.68$.)

of the effect of the stock market on hogs, but because business is likely to be active and employment conditions good about six months after the stock market is high and business is likely to decline after the stock market falls. The stock market is in no case the cause. It is merely one of the signs of an economic situation—a business barometer.

There is a high correlation between the price of contract corn at Chicago and industrial stocks, thirty months previous. This relationship is shown in Fig. 61. Probably the reason for this is that the primary market for corn is as food for hogs. Since hogs tend to be high in price about six months after stocks are high, and since it takes about two years to overexpand the hog business so that there are too many hogs for the corn crop, it is to be expected that corn will be high priced about two years later. The hog-corn relationship is probably dominant. The relationship with industrial stocks may be due primarily to the fact that the length of life of a hog is such that the periods of over- and under-production are approximately the same length as the business cycle.

TABLE LXIX

PRICES PAID TO PRODUCERS FOR CORN IN THE UNITED STATES

Cents per Bushel

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	58.2	59.5	60.5	62.1	64.7	67.7	69.2	70.9	73.3	70.1	63.4	58.4	64.8
1910	62.3	65.2	65.9	65.5	63.5	65.2	66.2	67.2	66.3	61.1	52.6	48.0	62.4
1911	48.2	49.0	48.9	49.7	51.8	55.1	60.0	65.8	65.9	65.7	64.7	61.8	57.2
1912	62.2	64.6	66.6	71.1	79.4	82.5	81.1	79.3	77.6	70.2	58.4	48.7	70.1
1913	48.9	50.6	52.2	53.7	56.8	60.6	63.2	65.4	75.4	75.3	70.7	69.1	61.8
1914	69.6	68.3	69.1	70.7	72.1	75.0	75.5	76.8	81.5	78.2	70.6	64.4	72.7
1915	66.2	72.8	75.1	75.1	77.7	77.9	77.7	78.9	77.3	70.5	61.9	57.5	72.4
1916	62.1	66.7	68.2	70.3	72.3	74.1	75.4	79.4	83.6	82.3	85.0	88.9	75.7
1917	90.0	95.8	100.9	113.4	150.6	160.1	164.6	196.6	175.5	175.1	146.0	127.9	141.4
1918	134.8	138.8	154.3	153.6	155.7	152.5	153.7	159.7	165.7	159.5	140.3	136.5	150.4
1919	144.7	138.1	137.2	149.6	162.6	171.2	176.5	191.2	185.4	153.9	133.4	134.5	156.6
1920	140.4	146.8	148.5	158.6	169.6	185.2	185.6	163.7	155.7	121.3	87.3	67.0	144.2
1921	66.7	62.4	64.5	63.0	59.5	62.5	62.2	61.7	56.2	51.0	41.1	42.4	57.8
1922	43.4	45.8	54.8	56.9	59.7	61.6	62.2	64.4	62.7	61.6	62.9	65.7	58.5
1923	69.6	70.7	74.3	76.3	83.0	85.0	86.5	87.4	86.6	85.7	83.9	72.7	80.1
1924	73.6	76.5	77.2	78.2	73.6	80.8	98.3	107.4	109.7				

TABLE LXX

INDEX NUMBER OF THE PRICE PAID TO PRODUCERS OF CORN
IN THE UNITED STATES

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	107	110	109	105	98	96	96	95	90	87	83	82	96
1911	83	82	81	80	80	81	87	93	90	94	102	106	88
1912	107	109	110	114	123	122	117	112	106	100	92	83	108
1913	84	85	86	86	88	90	91	92	103	107	112	118	95
1914	120	115	114	114	111	111	109	108	111	112	111	110	112
1915	114	122	124	121	120	115	112	111	105	101	98	98	112
1916	107	112	113	113	112	109	109	112	114	117	134	152	117
1917	155	161	167	183	233	236	238	277	239	250	230	219	218
1918	232	233	255	247	241	225	222	225	226	228	221	234	232
1919	249	232	227	241	251	253	255	270	253	220	210	231	242
1920	241	247	245	255	262	274	268	231	212	173	138	116	223
1921	115	105	107	101	92	92	90	87	77	73	65	73	89
1922	75	77	91	92	92	91	90	91	86	88	99	113	90
1923	120	119	123	123	128	126	125	123	118	122	132	124	124
1924	126	129	128	126	121	119	142	151	150				

TABLE LXXI

PRICES PAID TO PRODUCERS FOR HOGS IN THE UNITED STATES

Dollars per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	7.03	7.12	7.41	7.59	7.23	7.16	7.25	7.47	7.61	7.38	6.97	6.72	7.25
1910	7.76	7.87	8.93	9.26	8.59	8.46	8.15	7.78	8.27	8.08	7.61	7.16	8.16
1911	7.44	7.04	6.74	6.17	5.72	5.66	5.92	6.54	6.53	6.09	5.86	5.71	6.29
1912	5.74	5.79	5.94	6.78	6.79	6.65	6.64	7.11	7.47	7.70	7.05	6.89	6.71
1913	6.77	7.17	7.62	7.94	7.45	7.61	7.81	7.79	7.68	7.60	7.33	7.16	7.49
1914	7.45	7.75	7.80	7.80	7.60	7.43	7.72	8.11	8.11	7.43	7.00	6.67	7.57
1915	6.57	6.34	6.33	6.48	6.77	6.80	6.84	6.61	6.79	7.18	6.35	6.02	6.59
1916	6.32	7.07	7.86	8.21	8.37	8.21	8.40	8.61	9.22	8.67	8.74	8.76	8.20
1917	9.16	10.33	12.32	13.61	13.72	13.50	13.35	14.24	15.69	16.15	15.31	15.73	13.59
1918	15.26	15.03	15.58	15.76	15.84	15.37	15.58	16.89	17.50	16.50	15.92	15.82	15.92
1919	15.69	15.53	16.13	17.39	18.00	17.80	19.22	19.30	15.81	13.88	13.36	12.66	16.23
1920	13.36	13.62	13.59	13.73	13.44	13.18	13.65	13.59	13.98	13.57	11.64	8.90	13.02
1921	8.72	8.58	9.13	7.96	7.62	7.22	8.09	8.73	7.51	7.31	6.66	6.52	7.84
1922	6.89	8.24	9.08	8.83	9.05	9.11	9.12	8.54	8.23	8.33	7.78	7.63	8.40
1923	7.77	7.65	7.52	7.45	7.13	6.37	6.68	6.85	7.81	7.23	6.66	6.39	7.13
1924	6.59	6.54	6.63	6.70	6.68	6.55	6.60	8.54	8.50				

TABLE LXXII

INDEX NUMBERS OF PRICES PAID TO PRODUCERS OF HOGS IN THE UNITED STATES
Corresponding Months, 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	110	111	121	122	119	118	112	104	109	109	109	107	113
1911	106	99	91	81	79	79	82	88	86	83	84	85	87
1912	82	81	80	89	94	93	92	95	98	104	101	103	93
1913	96	101	103	105	103	106	108	104	101	103	105	107	103
1914	106	109	105	103	105	104	106	109	107	101	100	99	104
1915	93	89	85	85	94	95	94	88	89	97	91	90	91
1916	90	99	106	108	116	115	116	115	121	117	125	130	113
1917	130	145	166	179	190	189	184	191	206	219	220	234	187
1918	217	211	210	208	219	215	215	226	230	224	228	235	220
1919	223	218	218	229	249	249	265	258	208	188	192	188	224
1920	190	191	183	181	186	184	188	182	184	184	167	132	180
1921	124	121	123	105	105	101	112	117	99	99	96	97	108
1922	98	116	123	116	125	127	126	114	108	113	116	114	116
1923	111	107	101	98	99	89	92	92	103	98	96	95	98
1924	94	92	89	88	92	91	91	114	112				

TABLE LXXIII

FARM VALUE AND PURCHASING POWER OF HOGS IN THE UNITED STATES*

Year	Value per Head in Currency Jan. 1	Index Number of Value per Head (1910-1914=100)	Purchasing Power (1910-1914=100)	Year	Value per Head in Currency Jan. 1	Index Number of Value per Head (1910-1914=100)	Purchasing Power (1910-1914=100)
1867	\$5.44	58	34	1896	\$4.35	46	66
1868	4.57	49	33	1897	4.10	44	65
1869	6.32	68	46	1898	4.39	47	67
1870	6.76	72	51	1899	4.40	47	64
1871	6.23	67	50	1900	5.50	59	70
1872	4.37	47	36	1901	6.20	66	81
1873	4.15	44	33	1902	7.03	75	89
1874	4.42	47	37	1903	7.78	83	92
1875	5.42	58	47	1904	6.15	66	75
1876	6.78	72	62	1905	5.99	64	74
1877	6.00	64	58	1906	6.18	66	73
1878	4.95	53	52	1907	7.62	81	85
1879	3.18	34	37	1908	6.05	65	69
1880	4.43	47	46	1909	6.55	70	72
1881	4.70	50	53	1910	9.17	98	94
1882	5.97	64	67	1911	9.37	100	105
1883	6.75	72	75	1912	8.00	85	86
1884	5.57	60	65	1913	9.86	105	103
1885	5.02	54	63	1914	10.40	111	111
1886	4.26	46	55	1915	9.87	105	105
1887	4.48	48	58	1916	8.40	90	78
1888	4.98	53	63	1917	11.75	126	81
1889	5.79	62	74	1918	19.54	209	111
1890	4.91	52	62	1919	22.02	235	116
1891	4.15	44	53	1920	19.07	204	86
1892	4.60	49	61	1921	12.97	139	80
1893	6.41	68	87	1922	10.06	107	76
1894	5.98	64	85	1923	11.46	122	77
1895	4.97	53	75	1924	9.76	104	68

* Prices as reported by the Department of Agriculture are converted to currency during the Civil War period by using the premiums on gold as given by the Treasury Department. The index number of wholesale prices is on a currency basis; therefore the prices of hogs are reduced to a currency basis.

Purchasing power is calculated by dividing the price index by the index number of wholesale prices for January 1. For years before 1900, a January number is not available. The yearly average for the year and preceding year is then used.

TABLE LXXIV

RATIOS BETWEEN HEAVY HOG PRICES AND NUMBER 2 MIXED CORN AT CHICAGO

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1860	10.1	12.8	12.0	10.7	10.0	10.4	12.1	13.4	14.3	14.0	16.6	16.4	12.4
1861	17.4	17.9	17.6	15.2	11.7	13.5	11.7	12.0	13.3	12.7	12.1	10.2	13.9
1862	10.2	10.9	12.5	11.2	9.3	9.2	9.1	7.9	10.0	8.5	11.1	10.3	10.0
1863	7.7	7.9	8.3	9.0	7.8	8.7	8.9	7.8	7.0	5.2	5.1	5.4	7.1
1864	7.2	7.1	8.3	7.6	6.2	6.3	6.6	7.1	7.3	6.9	7.2	10.4	7.3
1865	12.4	12.8	14.1	15.1	13.9	15.0	16.5	16.2	19.5	24.9	21.4	21.1	16.3
1866	24.5	27.0	25.4	20.4	18.1	17.6	16.8	17.6	17.2	13.1	8.0	7.7	16.1
1867	8.7	9.6	8.9	7.3	6.5	6.7	7.6	7.1	6.2	5.5	5.9	7.9	7.2
1868	7.8	9.5	10.4	10.4	9.4	9.0	9.5	9.4	9.3	8.6	9.2	13.1	9.6
1869	18.5	18.5	18.2	18.1	15.1	14.1	11.1	10.2	11.0	13.9	12.5	12.9	13.9
1870	12.6	12.9	11.9	10.7	10.1	10.4	10.8	12.8	14.5	13.2	11.2	12.3	11.8
1871	14.0	14.1	12.5	10.3	8.5	7.1	8.6	9.7	9.6	9.1	8.7	10.1	10.2
1872	10.7	11.0	11.8	10.6	8.8	8.8	9.9	11.3	13.5	14.2	13.4	12.2	11.2
1873	12.6	13.6	15.4	15.9	12.5	13.3	12.6	12.0	11.3	11.5	10.1	9.3	12.3
1874	9.5	9.7	8.9	8.8	8.9	9.2	9.8	10.3	9.5	7.9	8.4	8.8	9.1
1875	9.9	10.9	11.4	11.6	11.2	10.4	10.1	12.3	13.5	14.4	14.1	14.3	11.8
1876	16.5	19.3	19.4	17.2	15.3	13.4	15.3	13.7	13.3	13.5	13.2	13.2	15.3
1877	14.7	14.7	13.9	11.9	10.4	10.4	10.3	11.5	12.2	12.5	11.1	10.1	11.9
1878	10.0	9.7	8.9	8.6	8.6	10.3	11.3	11.3	10.7	9.9	9.3	8.9	10.0
1879	9.2	11.9	12.0	10.1	10.1	10.8	9.9	10.2	10.2	9.2	10.0	11.2	10.3
1880	12.0	12.2	12.6	12.6	11.9	12.2	13.6	13.9	13.5	12.7	11.6	12.3	12.8
1881	14.4	16.1	15.6	14.7	14.9	13.7	13.8	11.5	10.5	10.2	10.8	10.4	12.7
1882	11.1	12.1	11.4	10.1	10.5	11.6	11.1	11.4	13.6	12.2	11.6	12.7	11.6
1883	11.9	12.6	13.6	14.0	13.1	12.1	10.9	10.6	10.3	10.3	10.1	9.2	11.6
1884	11.3	13.1	13.7	12.2	10.2	9.8	10.7	12.0	10.2	10.8	12.1	12.4	11.5
1885	12.5	13.1	11.8	10.2	8.5	8.7	9.3	9.8	9.7	8.9	8.6	10.0	10.1
1886	11.1	11.7	12.1	12.1	11.8	12.3	12.5	11.2	11.7	12.0	10.7	12.0	11.7
1887	13.1	15.5	16.6	15.6	13.5	13.7	14.8	13.0	12.0	11.3	11.2	11.1	13.5
1888	11.6	11.6	11.3	10.5	9.8	11.1	12.6	14.1	14.5	13.9	13.9	15.1	12.3
1889	14.7	13.2	13.6	13.7	13.2	12.5	11.8	11.4	12.0	13.0	11.7	11.1	12.7
1890	12.9	13.7	14.5	13.5	12.0	10.9	9.6	7.9	9.1	8.3	7.5	7.0	9.9
1891	7.4	6.8	6.8	6.9	7.5	7.7	8.3	7.9	8.4	7.4	6.8	7.9	7.5
1892	10.9	11.3	10.2	11.1	8.5	9.9	11.2	10.4	11.1	12.7	12.9	14.6	11.2
1893	18.0	19.2	18.7	17.8	17.8	16.5	14.8	13.4	14.6	16.3	15.1	14.5	16.5
1894	15.2	14.8	13.1	13.2	13.1	11.8	12.4	10.0	10.8	10.2	8.9	9.6	11.7
1895	10.0	9.8	10.2	10.9	9.0	9.4	11.2	12.0	12.9	12.7	12.8	13.8	11.0
1896	14.7	14.4	13.6	12.0	11.5	11.5	11.6	13.4	13.9	13.8	13.4	14.1	13.1
1897	14.9	15.0	16.2	16.7	15.3	13.8	13.3	13.6	13.4	14.3	12.8	12.7	14.3
1898	13.5	13.9	13.5	12.3	12.4	12.7	11.9	12.2	12.7	12.0	10.5	9.7	12.2
1899	10.4	10.7	11.0	11.1	11.7	11.1	12.8	14.4	13.4	13.4	12.2	13.1	12.1
1900	14.5	14.8	13.9	14.1	14.0	12.9	12.6	13.2	12.9	12.0	11.7	12.7	13.2
1901	14.1	14.0	14.6	13.1	11.8	14.0	11.6	10.5	11.7	10.9	9.4	9.6	11.9
1902	10.4	10.6	11.0	11.7	11.4	11.6	11.0	12.6	12.6	11.7	11.6	12.6	11.6
1903	14.3	16.1	17.1	16.8	14.7	12.2	10.7	10.2	11.5	12.1	10.7	10.7	13.0
1904	10.9	10.2	10.6	9.9	9.8	10.9	10.9	9.8	10.8	10.1	8.9	9.7	10.2
1905	11.0	11.1	11.0	11.4	10.2	9.7	9.8	10.8	10.2	9.8	9.9	10.4	10.5
1906	12.8	14.9	15.0	14.0	13.2	12.5	12.7	12.4	12.8	14.0	13.8	14.2	13.5
1907	15.9	16.1	15.1	14.0	12.1	11.3	11.0	10.4	9.3	9.7	8.4	7.8	11.4
1908	7.5	7.8	8.0	8.8	7.4	8.3	8.7	8.4	8.7	8.2	9.3	9.1	8.4
1909	10.5	10.2	10.3	10.5	9.9	10.5	11.0	11.1	12.0	12.9	12.8	13.2	11.1
1910	13.3	14.2	17.2	17.1	15.7	15.9	13.8	13.0	15.8	17.0	15.1	16.0	15.3
1911	16.8	15.5	14.3	12.2	10.8	11.1	10.4	11.1	10.0	9.0	8.7	9.0	11.3
1912	9.4	9.6	10.3	10.0	9.6	10.1	10.5	10.4	11.3	13.4	14.0	15.1	10.9
1913	15.1	16.1	17.1	15.7	14.7	14.0	14.3	10.9	10.8	11.6	10.7	10.9	13.1
1914	13.3	13.7	13.1	12.7	11.9	11.5	12.1	10.8	11.0	10.3	10.5	11.0	11.7
1915	9.4	8.9	9.6	9.3	9.7	9.9	8.8	8.4	9.8	12.1	10.6	9.2	9.6
1916	9.6	10.9	13.0	12.7	13.2	13.1	12.0	11.9	12.1	10.3	9.9	10.9	11.6
1917	11.1	12.4	13.3	10.9	9.8	9.2	7.5	8.6	8.8	8.7	8.4	9.8	9.2
1918	9.2	9.6	9.9	10.5	10.7	10.4	10.7	11.2	12.3	12.6	12.9	12.1	10.9
1919	12.4	13.4	12.7	12.4	11.7	11.3	11.0	10.0	11.2	10.1	9.2	8.9	11.0
1920	9.7	9.7	9.1	8.3	7.0	7.6	9.1	9.2	11.5	15.0	14.5	12.1	9.6
1921	13.3	13.8	14.7	14.1	13.3	12.9	15.2	16.0	13.7	15.9	14.0	13.8	14.3
1922	15.9	17.1	17.3	16.9	16.4	16.4	14.6	13.0	13.2	12.3	11.0	10.8	14.4
1923													
Average 1860-79	12.2	13.1	13.1	12.0	10.6	10.7	10.9	11.2	11.7	11.4	10.9	11.3	11.4
Average 1880-99	12.6	13.0	13.0	12.6	11.8	11.7	11.9	11.7	11.9	11.8	11.3	11.7	12.0
Average 1900-20	12.1	12.5	12.9	12.4	11.6	11.5	11.1	10.8	11.3	11.3	10.8	11.1	11.5

TABLE LXXV

HOG-CORN RATIOS AT FARM PRICES IN IOWA

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	15.29	15.00	18.46	18.63	17.92	17.60	15.47	13.82	15.00	16.12	18.72	19.17	16.46
1911	20.83	18.65	17.30	15.26	13.17	12.27	12.04	12.32	11.79	10.35	10.00	10.57	13.13
1912	10.77	10.36	10.71	11.80	10.29	9.86	10.30	11.69	11.64	13.44	14.40	20.00	11.75
1913	19.17	19.74	20.77	20.73	17.11	16.00	15.96	14.63	11.67	11.52	12.17	11.83	15.14
1914	13.28	14.29	14.46	13.73	13.22	11.90	12.70	13.28	11.53	10.43	11.15	11.82	12.64
1915	11.23	9.39	9.54	10.16	10.15	10.29	10.00	9.01	9.44	11.21	10.34	11.37	10.06
1916	10.88	12.10	14.75	13.85	13.79	12.94	13.19	12.74	12.86	11.84	11.67	11.38	12.70
1917	12.25	12.95	15.00	13.78	10.79	10.14	9.29	7.77	10.24	9.94	11.62	15.00	11.04
1918	12.89	12.64	12.09	12.06	11.86	11.70	11.90	12.24	12.27	12.32	14.26	13.44	12.43
1919	12.06	13.20	14.26	13.36	12.66	11.84	12.53	10.92	9.17	10.15	12.16	10.25	11.77
1920	10.98	10.70	10.86	9.72	8.82	7.93	8.43	10.29	10.81	14.53	18.28	17.66	10.63
1921	15.88	19.09	19.17	17.91	18.50	15.91	18.44	20.22	17.25	19.17	22.59	20.00	18.51
1922	21.25	25.14	20.64	20.89	20.00	19.59	19.00	16.86	16.12	16.40	13.96	13.21	18.26
1923	13.05	12.93	11.94	11.94	10.14	8.45	8.77	8.92	10.53	9.21	8.05	9.84	10.19
1924	10.16	9.55	9.85	10.00	10.00	9.41	6.91	8.53	8.29				

TABLE LXXVI—WHOLESALE PRICES OF HOGS—CIVIL WAR AND WORLD WAR

Hogs, New York City (good to prime, live weight)*			Live hogs (bulk of sales), Chicago†		
Year	Price per Pound	Index Number	Year	Price per Pound	Index Number
Average, October, 1856 to July, 1861:	Cents		Average, 1910 to 1914:	Cents	
January	5.75	100	January	7.72	100
April	6.088	100	April	8.26	100
July	5.512	100	July	8.08	100
October	6.062	100	October	7.86	100
1861: October	3.9375	65	1914: October	7.55	96
1862: January	3.75	65	1915: January	6.80	88
April	4.625	76	April	7.05	85
July	3.5625	65	July	6.95	86
October	4.1875	69	October	7.75	99
1863: January	4.6875	82	1916: January	7.30	95
April	5.50	90	April	9.70	117
July	5.50	100	July	9.75	121
October	4.9375	81	October	9.85	125
1864: January	7.125	124	1917: January	11.00	142
April	8.75	144	April	15.80	191
July	11.05	200	July	15.20	188
October	11.25	186	October	17.25	219
1865: January	13.75	239	1918: January	16.40	212
April	12.00	197	April	17.40	211
July	10.625	193	July	17.70	219
October	14.375	237	October	17.55	223
1866: January	10.375	180	1919: January	17.60	228
April	10.75	177	April	20.30	246
July	10.375	188	July	21.65	268
October	10.875	179	October	14.25	181
1867: January	6.625	115	1920: January	14.90	193
April	8.375	138	April	14.40	174
July	7.25	132	July	14.50	179
October	7.1875	119	October	13.70	174
1868: January	7.4375	129	1921: January	9.25	120
April	9.375	154	April	8.25	100
July	8.875	161	July	9.50	118
October	9.9375	164	October	7.40	94
1869: January	10.25	178	1922: January	7.80	101
April	11.00	181	April	10.15	123
July	9.4375	171	July	9.40	116
October	10.375	171	October	8.60	109
1870: January	10.25	178	1923: January	8.20	106
April	9.50	156	April	7.90	96
July	9.1875	167	July	6.85	85
October	9.0625	149	October	7.35	94
1871: January	6.75	117			
April	7.00	115			
July	4.75	86			
October	5.1875	86			
1872: January	5.00	87			
April	4.875	80			
July	4.50	82			
October	5.25	87			
1873: January	4.75	83			
April	6.50	107			
July	5.125	93			
October	5.375	89			
1874: January	5.28	92			
April	5.50	90			
July	5.50	100			
October	6.25	103			
1875: January	7.25	126			
April	8.125	134			
July	8.25	150			
October	8.625	142			
1876: January	7.90	137			
April	8.50	140			
July	7.25	132			
October	6.625	109			
1877: January	6.875	120			
April	5.75	94			
July	5.375	98			
October	5.50	91			
1878: January	4.70	82			
April	3.90	64			
July	4.40	80			
October	4.00	66			
1879: January	3.175	55			
April	4.1875	69			
July	4.10	74			
October	4.125	68			
1880: January	4.95	86			
April	4.80	79			
July	4.60	83			
October	5.425	89			

* Wholesale prices, wages, and transportation. Report by Mr. Aldrich, from the Committee on Finance, March 3, 1893. Senate Report No. 1394, Fifty-second Congress, second session, Part II.

† As reported by the United States Department of Agriculture.

TABLE LXXVII—WHOLESALE PRICES OF CORN—CIVIL WAR AND WORLD WAR

Corn—New York City*			Corn, Contract Grade, Chicago†		
Year	Price per Bushel	Index Number	Year	Price per Bushel	Index Number
Average, October, 1856 to July, 1861:	Cents		Average, 1910 to 1914:	Cents	
January	73.4	100	January	58.1	100
April	72.4	100	April	62.1	100
July	70.1	100	July	66.5	100
October	74.2	100	October	66.1	100
1861: October	54.4	73	1915: January	72.4	125
1862: January	64.5	88	April	75.5	122
April	57.75	80	July	78.8	118
July	55	78	October	63.9	97
October	59.5	80	1916: January	75.9	131
1863: January	79.25	108	April	76.5	123
April	92	127	July	81.2	122
July	75.25	107	October	95.9	145
October	86.75	117	1917: January	99.0	170
1864: January	130	177	April	145.0	233
April	130	180	July	204.1	307
July	158	225	October	193.3	292
October	158	213	1918: January	178.0	306
1865: January	187	255	April	166.3	268
April	142.5	197	July	166.0	250
July	74	106	October	139.4	211
October	91	123	1919: January	142.2	245
1866: January	92.5	126	April	163.8	264
April	77	106	July	197.6	297
July	87.5	125	October	141.8	215
October	95	128	1920: January	153.0	263
1867: January	116	158	April	172.6	278
April	121.5	168	July	159.3	240
July	99.5	142	October	91.4	138
October	132.5	179	1921: January	69.6	120
1868: January	141	192	April	58.6	94
April	123	170	July	62.4	94
July	102	146	October	46.7	71
October	113	152	1922: January	49.1	85
1869: January	108	147	April	60.0	97
April	94	130	July	64.6	97
July	101	144	October	69.7	105
October	97	131	1923: January	71.9	124
1870: January	111.5	152	April	80.7	130
April	103	142	July	86.7	130
July	96	137	October	103.9	157
October	87	117			
1871: January	76.5	104			
April	83	115			
July	71.625	102			
October	76	102			
1872: January	78.25	107			
April	71.75	99			
July	64.5	92			
October	64.5	87			
1873: January	66.125	90			
April	65	90			
July	54.75	78			
October	66.75	90			
1874: January	82.5	112			
April	85.25	118			
July	76.75	109			
October	95.75	129			
1875: January	92.5	126			
April	86.5	119			
July	81	116			
October	66.25	89			
1876: January	68	93			
April	67.25	93			
July	58	83			
October	56.75	76			
1877: January	60.5	82			
April	55.375	76			
July	58.375	83			
October	58.25	79			
1878: January	64.125	87			
April	55.5	77			
July	44.875	64			
October	48.625	66			
1879: January	47.125	64			
April	45.125	62			
July	43.6	62			
October	52.5	71			
1880: January	62.875	86			
April	54.5	75			
July	50.25	72			
October	51.8	70			

* Wholesale prices, wages, and transportation. Report by Mr. Aldrich from the Committee on Finance, March 3, 1893. Senate Report No. 1394, Fifty-second Congress, second session, Part II.

† As reported by the United States Department of Agriculture.

CHAPTER XV

DAIRY PRODUCTS

Civil War and World War prices of butter and cheese.—When financial inflation took place at the beginning of each war prices rose faster than wages. As a result there was in each case a real high cost of living. Since butter is somewhat of a luxury it is one of the commodities of which the consumption is reduced when economy is necessary. Prices of butter rose less rapidly than did the average prices of foods. After the Civil War, wages remained

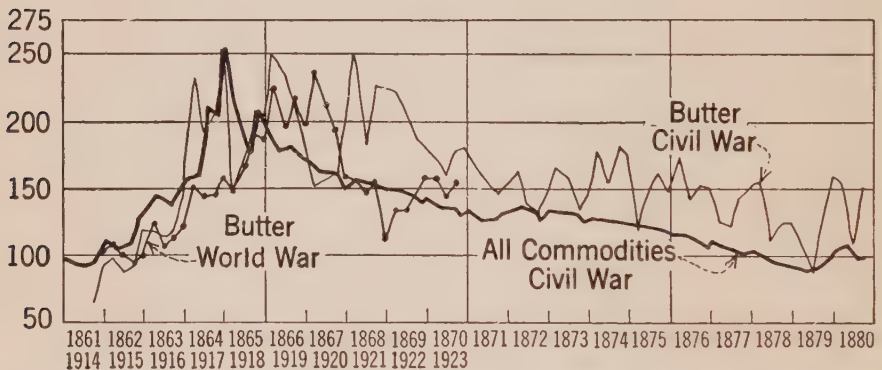


FIG. 63.—Civil War and World War prices of butter, and prices of all commodities for Civil War period. During each war period, butter rose in price less rapidly than the general price level. Following each war, wages were higher than the general price level and butter declined less rapidly than most commodities.

high for many years and the price of butter remained higher than most products. Thus far the experiences of the Civil War period have been repeated in that prices of butter remained higher than other foods after the close of the World War.

In the United States only a limited amount of cheese is made and apparently the price of cheese has to keep in reasonable adjustment with the price of butter. For a short period of time they may be quite out of adjustment, depending on the immediate supply

and demand. Over a series of years, the ease of shifting from butter production to cheese production holds cheese in adjustment with butter. The price of cheese during the Civil War period followed much the same course as the price of butter. It was low during most of the period of inflation and remained high for many years following the war. The World War experience thus far has been very similar.

So long as financial deflation is taking place it seems probable that the general average price of dairy products will be higher than the price of most food products owing to the tendency of wages to lag behind prices. This does not mean that dairy products will



FIG. 64.—Civil War and World War prices of cheese, and prices of all commodities for the Civil War period.

at all times be higher than other foods. It applies only to the long-time tendencies rather than to the short-time fluctuation.

There is a strong tendency to increase the number of dairy cows. This may result in a period of overproduction, but this again will not necessarily change the long-time tendency for prices of dairy products to be higher than average food prices when compared with pre-war relationships.

Farm price of butter.—The farm prices of butter compared with average prices paid to farmers for all food products is shown in Fig. 65. For four years butter was lower in price than most food products. It has since been higher.

When compared with all commodities, butter was low in price for five years and has been about the same as the average price of all commodities for four years.

When prices were rising butter followed the usual tendency and rose somewhat more in the regions far from market than in regions near market. When prices fell the relationships were reversed.

Farm price of milk in New York.—The retail price of milk has

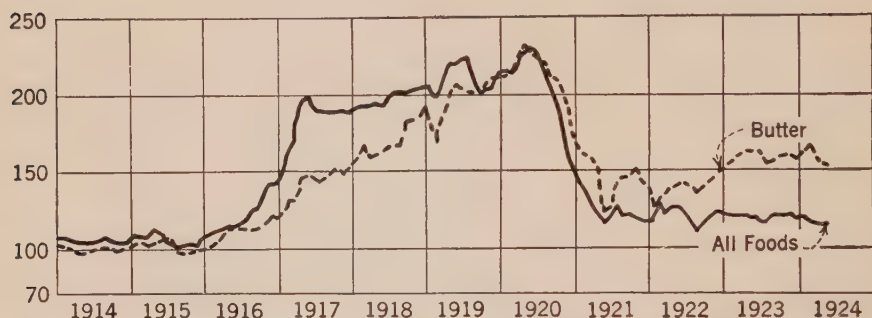


FIG. 65.—Prices paid to farmers for butter and for all food products. When prices rose wages rose less rapidly, and consequently butter rose in price less rapidly than the average for all farm foods. When prices fell, butter fell less rapidly.

a tendency to remain fixed. Changes are made very infrequently. The pressure to hold farm prices at a point that will make possible the maintenance of the former retail prices was so great that for two years after inflation began the farm price of milk rose very little.

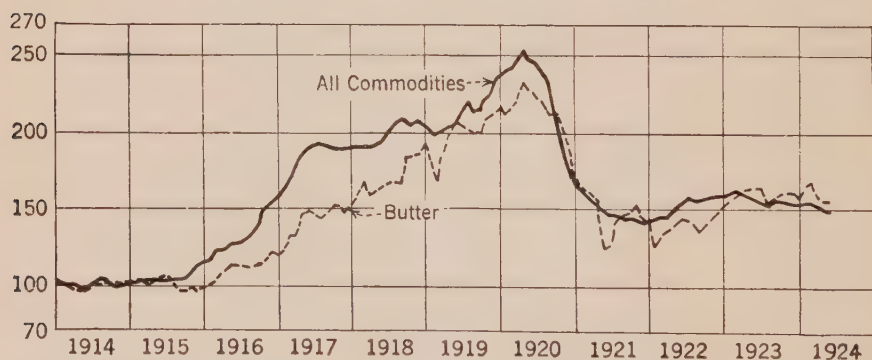


FIG. 66.—Prices paid to farmers for butter, and wholesale prices of all commodities.

The intolerable position into which this forced the dairymen led to milk strikes and very rapid advances in prices. These advances, in turn, led to governmental interference and price fixing with the usual erratic results. Later cooperative associations were formed for handling milk, and the many controversies involved continued

to make milk prices erratic. The great difficulty in changing retail prices makes it difficult to adjust prices of milk during a period of

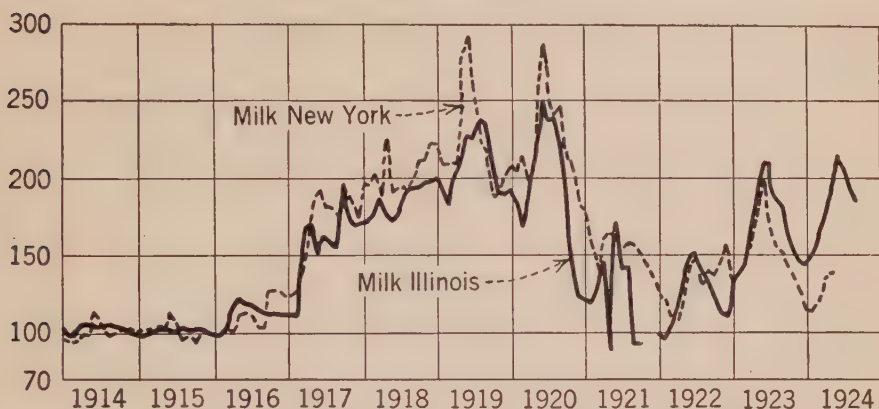


FIG. 67.—Prices paid to farmers for milk in New York and in the Chicago territory. One of the striking things for each region is the tendency for summer prices to be higher relative to winter prices in the later years.

inflation or deflation. In either case violent fluctuations are to be expected.

Farm price of milk in the Chicago district.—Chicago milk history followed much the same course as New York. First the

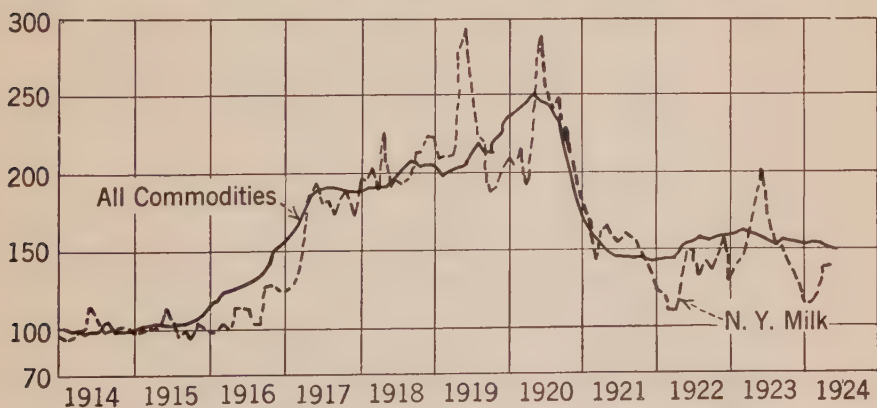


FIG. 68.—Prices paid to farmers in New York for milk, and the wholesale prices of all commodities.

dealers attempted to keep prices down, although prices in general were rising. A successful strike followed. This in turn was followed by violent agitation in the city newspapers, legal investigation, food

commissions, and the like. If milk could have followed the course of general prices it would have been better for all concerned and the costly investigations would not have been necessary. However, this would have required an understanding of the relation of money and prices which is far from common knowledge.

The Cooperative Milk Marketing Company was formed and handled the milk for a time. This company became financially involved and farmers received no cash for their milk in November and December, 1921.

Price of veal calves.—Veal calves are primarily a dairy product. Prices received by farmers for calves are in part dependent on the demand for veal and in part dependent on the prosperity of the dairy industry. Only about 1 in 10 of the bull calves needs to be kept. Of the heifer calves nearly one-half are commonly raised. When dairying is very prosperous larger numbers are kept. When less prosperous, larger numbers are sold. Simple as this principle is it is little understood. At one time the Food Administration followed the popular city idea, and discouraged the use of veal, thinking thereby to increase the number of dairy cows. Since veal calves are one of the products of the dairy, a reduced price for these would reduce the profits in dairying and reduce the tendency to expand the business. To attempt to increase an industry by making it unprofitable is a peculiar economic theory. On that basis if one wished new steel mills built he would reduce the price of steel on the assumption that steel would be so cheap that the mills making it would use it themselves for new construction rather than sell it for the low price.

This philosophy was also applied by government agencies to the egg situation on the theory that if eggs were cheap and farmers could not sell the hens they would put the cheap eggs under the cheap hen in order to have more cheap hens the next year.

Prices of dairy cows.—When butter was rising in price and labor costs were reasonably constant dairy cows rose in price. When butter fell cows fell much more rapidly, because the other items in the cost of producing butter fell less than the price of butter.

When inflation was taking place the price of dairy cows in the more distant states rose more rapidly than the prices in the states nearer market. When prices fell they fell more rapidly.

Grade cows ready to freshen did not fall in price so much as did

dry cows or young stock. The further the product is from the consumer the more violent the price fluctuations. Dairy cows fell more than did the price of butter. Pure-bred cows rose more when prices were high, and fell more when prices were low than did ordinary cows. Prices of the best pure-breds fluctuated even more widely. Many cows sold during the period of high prices for four times the pre-war price. When prices fell, these same animals were worth much less than their pre-war values. Pure-bred bulls of the best quality were even more affected. Animals that would have brought several thousand dollars in 1920 were difficult to sell at any price in 1922. The pure-bred bull of the best quality is furthest from the final salable product. Such bulls are used in herds that breed animals to sell to less select pure-bred herds,

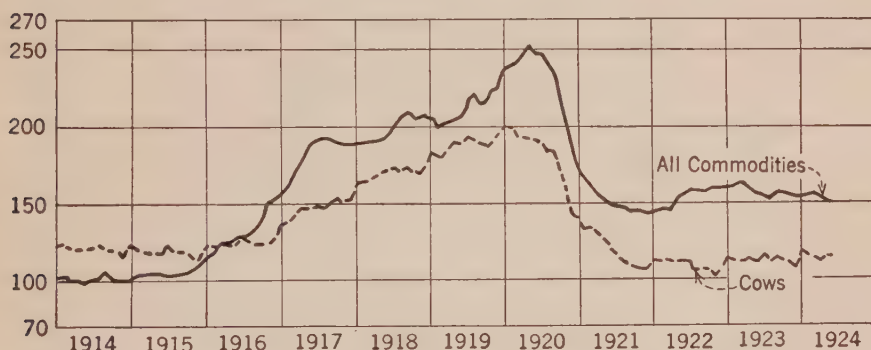


FIG. 69.—Farm prices of cows, and wholesale prices of all commodities.

which, in turn, sell bulls to less selected pure-bred herds. These, in turn, raise bulls to sell for use in grade herds. At every step from the final product the price fluctuations are more violent. For this reason many progressive farmers who went into the breeding of the best animals were bankrupt by the decline in prices. Large numbers of the best herds were dispersed at public or private sales. The pure-bred stock business is a very hazardous industry, and especially so if conducted on borrowed capital. When prices are rising the pure-breds rise so much more than grades, and the first-class ones rise so much more than ordinary pure-bred stock, that it is very easy to become deeply involved. Since in the cycles of high and low prices, hogs rise for two to three years, beef cattle for six to eight years, and horses for ten to twelve years, the pyramiding process goes on so long that even cautious men often come

to think that the high prices are on a permanent basis. The casualties from the pure-bred stock business are usually the most progressive farmers. Horses and beef cattle were in a period of overproduction and declining prices when the period of deflation occurred and made the usual trouble of such a period even worse.

When horses were at the peak, stallions sold for \$2000 that a few years later were worth \$200 for work horses. Pure-bred hogs that sold for several hundred dollars, when hogs were high, were later worth \$30 for pork.

Pure-bred bulls that were too valuable to be owned by one man were bought by several farmers, and when prices fell all the owners were, in some cases, bankrupt.

Another factor in the situation is the common tendency to sell

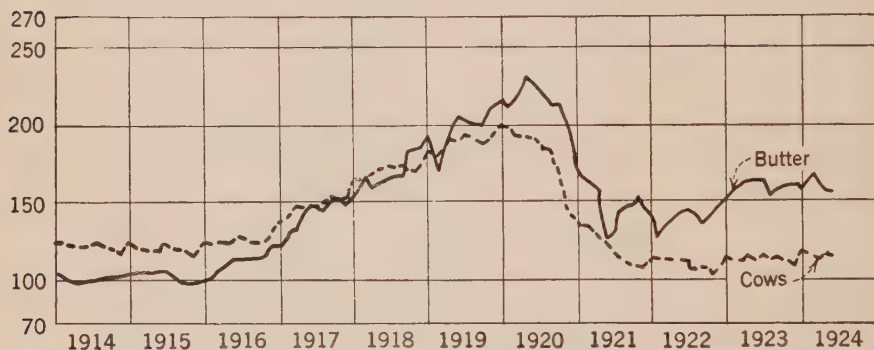


FIG. 70.—Prices paid to farmers for butter, and farm prices of cows. When prices fell, labor and other costs remained high, and the price of cows fell more than did the price of butter.

pure-breds on time. Some men who had valuable farms and whose notes receivable far exceeded their debts were bankrupt because they found it impossible to collect from the large number of farmers to whom they sold on credit.

On the other hand, during a depression there are excellent opportunities to buy very superior animals at low prices and thereby become established in the pure-bred business with a small investment.

Expansion and contraction in production.—With a given number of dairy cows it is possible to greatly increase or decrease milk production, by changing the feeding practice. This prevents dairy products from showing the marked cycles of over- and under-production that are shown by hogs, by beef cattle, and by horses.

TABLE LXXVIII—WHOLESALE PRICES OF BUTTER—CIVIL WAR AND WORLD WAR

Butter in Boston*			Butter, Creamery, Extra, New York City†		
Year	Price per Pound	Index Number	Year	Price per Pound	Index Number
Average, October, 1856 to July, 1861:	Cents		Average, October, 1909 to July, 1914:	Cents	
January.....	20.8	100	January.....	33	100
April.....	21	100	April.....	29	100
July.....	17.35	100	July.....	27	100
October.....	20.65	100	October.....	31	100
1861: October.....	13.5	65	1915: January.....	34	103
1862: January.....	19	91	April.....	31	107
April.....	20.5	98	July.....	27	100
July.....	15.5	89	October.....	29	94
October.....	19	92	1916: January.....	33	100
1863: January.....	24.5	118	April.....	36	124
April.....	25	119	July.....	29	107
July.....	19.5	112	October.....	35	113
October.....	24	116	1917: January.....	40	121
1864: January.....	30.5	147	April.....	44	152
April.....	48.5	231	July.....	39	144
July.....	33	190	October.....	45	145
October.....	42.5	206	1918: January.....	52	158
1865: January.....	52.5	252	April.....	43	148
April.....	31.5	150	July.....	45	167
July.....	30	173	October.....	59	190
October.....	43	208	1919: January.....	62	188
1866: January.....	42.5	204	April.....	65	224
April.....	52.5	250	July.....	53	196
July.....	41.	235	October.....	67	216
October.....	41.5	201	1920: January.....	65	197
1867: January.....	38.5	185	April.....	71	245
April.....	31.5	150	July.....	57	211
July.....	27.0	156	October.....	60	194
October.....	33.5	162	1921: January.....	52	158
1868: January.....	42.5	204	April.....	45	155
April.....	52.5	250	July.....	40	148
July.....	31.5	182	October.....	47	152
October.....	46.5	225	1922: January.....	37	112
1869: January.....	46.5	224	April.....	38	131
April.....	44	210	July.....	36	133
July.....	36	207	October.....	46	148
October.....	39	189	1923: January.....	52	158
1870: January.....	37.5	180	April.....	46	159
April.....	36.5	174	July.....	39	144
July.....	27.5	159	October.....	48	155
October.....	37	179			
1871: January.....	37.5	180			
April.....	35	167			
July.....	26.5	153			
October.....	30	145			
1872: January.....	32	154			
April.....	34	162			
July.....	24	138			
October.....	27.5	133			
1873: January.....	30.5	147			
April.....	35	167			
July.....	27	156			
October.....	27.5	133			
1874: January.....	30.5	147			
April.....	37.5	179			
July.....	26.5	153			
October.....	37.5	182			
1875: January.....	36.5	175			
April.....	25.0	119			
July.....	26.0	150			
October.....	33.5	162			
1876: January.....	31.0	149			
April.....	36.5	174			
July.....	24.5	141			
October.....	31.5	153			
1877: January.....	31.5	151			
April.....	26.5	126			
July.....	21.0	121			
October.....	29.5	143			
1878: January.....	31.5	151			
April.....	32.5	155			
July.....	19.0	110			
October.....	25.5	123			
1879: January.....	26.0	125			
April.....	21.5	102			
July.....	15.5	89			
October.....	26.5	128			
1880: January.....	33.0	159			
April.....	32.5	155			
July.....	20.5	118			
October.....	31.0	150			

* Wholesale prices, wages, and transportation.

Report by Mr. Aldrich from the Committee on Finance, March 3, 1893. Senate Report, No. 1394 Fifty-second Congress, second session, Part II.

† As reported by the United States Department of Agriculture.

TABLE LXXIX—WHOLESALE PRICES OF CHEESE—CIVIL WAR AND WORLD WAR

Cheese, Boston*			Cheese, Colored, New York†		
Year	Price per Pound	Index Number	Year	Price per Pound	Index Number
Average, October, 1856 to July, 1861:	Cents		Average, October, 1909 to July, 1914:	Cents	
January.....	9.22	100	January.....	16	100
April.....	10.22	100	April.....	15	100
July.....	7.00	100	July.....	14	100
October.....	8.06	100	October.....	16	100
1861: October.....	6.0	74	1915: January.....	15	94
1862: January.....	7.0	76	April.....	15	100
April.....	7.5	73	July.....	15	107
July.....	6.5	93	October.....	15	94
October.....	8.0	99	1916: January.....	17	106
1863: January.....	11.0	119	April.....	17	113
April.....	14.5	142	July.....	15	107
July.....	10.5	150	October.....	21	131
October.....	12.0	149	1917: January.....	22	138
1864: January.....	14.0	152	April.....	25	167
April.....	17.0	166	July.....	23	164
July.....	15.0	214	October.....	24	150
October.....	20.5	254	1918: January.....	23	143
1865: January.....	22.5	244	April.....	22	147
April.....	21.0	205	July.....	25	179
July.....	12.5	179	October.....	32	200
October.....	15.0	186	1919: January.....	36	225
1866: January.....	18.0	195	April.....	32	213
April.....	21.5	210	July.....	32	229
July.....	19.0	271	October.....	31	194
October.....	14.5	180	1920: January.....	31	194
1867: January.....	14.5	157	April.....	28	187
April.....	19.0	186	July.....	26	186
July.....	15.0	214	October.....	26	163
October.....	14.5	180	1921: January.....	25	156
1868: January.....	14.5	157	April.....	25	167
April.....	16.5	161	July.....	18	129
July.....	14.5	207	October.....	22	138
October.....	16.0	199	1922: January.....	22	138
1869: January.....	19.0	206	April.....	23	153
April.....	22.0	215	July.....	20	143
July.....	16.0	229	October.....	25	156
October.....	15.5	192	1923: January.....	28	175
1870: January.....	17.5	190	April.....	23	153
April.....	14.0	137	July.....	25	179
July.....	13.0	186	October.....	26	163
October.....	13.3	165			
1871: January.....	14.0	152			
April.....	13.0	127			
July.....	11.8	169			
October.....	13.0	161			
1872: January.....	13.3	144			
April.....	19.0	186			
July.....	11.0	157			
October.....	13.3	165			
1873: January.....	13.3	144			
April.....	16.0	157			
July.....	11.8	169			
October.....	13.3	165			
1874: January.....	13.3	144			
April.....	16.0	157			
July.....	11.8	169			
October.....	14.5	180			
1875: January.....	15.0	163			
April.....	15.8	155			
July.....	11.8	128			
October.....	13.3	165			
1876: January.....	12.8	139			
April.....	13.3	130			
July.....	10.3	147			
October.....	12.5	155			
1877: January.....	14.3	155			
April.....	14.5	142			
July.....	9.5	136			
October.....	12.8	159			
1878: January.....	12.8	139			
April.....	12.5	122			
July.....	7.0	100			
October.....	8.8	109			
1879: January.....	8.5	92			
April.....	7.0	68			
July.....	5.0	71			
October.....	10.3	128			
1880: January.....	12.5	136			
April.....	14.5	142			
July.....	7.8	111			
October.....	12.8	159			

* Wholesale prices, wages, and transportation. Report by Mr. Aldrich from the Committee on Finance, March 3, 1893. Senate Report No. 1394. Fifty-second Congress, second session, Part II.

† As reported by the United States Department of Agriculture.

Relation of industrial conditions to prices of dairy products.—When there is full employment the demand for dairy products is increased. Prices of industrial stocks are a good measure of industrial conditions. When money is cheap, the prices of stocks usually rise somewhat in advance of improved business conditions. The prices of butter and cheese tend to lag about eight to ten months behind the stock market. For the period 1897 to 1913, prices of creamery extra butter in New York City correlated with industrial stocks, giving butter a lag of ten months, showed a correlation of 0.30. The correlation between prices of stocks and prices of cheese at New York, giving a lag of eight months, was 0.55.

The price of milk at four cities, New York, Chicago, Philadelphia, and St. Louis, correlated with prices of industrial stocks, giving milk a lag of fourteen months, showed a correlation of 0.56.

TABLE LXXX

PRICES PAID TO PRODUCERS OF BUTTER IN THE UNITED STATES

Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	28.4	27.2	25.9	25.4	24.7	23.5	22.9	23.6	24.7	25.8	26.7	28.3	25.6
1910	28.7	27.9	26.3	25.8	25.5	24.1	23.3	23.8	25.2	26.2	27.1	27.8	26.0
1911	27.8	24.1	22.7	22.6	21.4	20.3	20.4	21.7	23.1	23.8	25.2	27.4	23.4
1912	28.1	29.0	27.2	26.1	26.0	24.8	23.4	23.7	24.2	25.6	26.9	28.8	26.2
1913	28.4	27.6	27.5	27.6	27.0	25.5	24.7	24.9	25.9	27.5	28.2	29.2	27.0
1914	29.2	27.4	26.0	24.9	23.8	22.8	22.9	23.7	25.3	26.0	26.3	28.4	25.6
1915	28.7	27.9	26.8	25.8	25.7	24.8	24.2	24.2	24.5	25.3	26.4	27.6	26.0
1916	28.3	27.6	27.1	27.6	27.9	26.5	25.7	26.1	27.4	29.0	31.1	34.4	28.2
1917	34.0	33.5	34.1	33.5	36.1	35.0	33.5	34.0	36.1	38.9	40.9	41.9	36.0
1918	43.1	43.7	43.4	40.7	39.9	38.6	38.2	39.7	41.4	47.2	49.7	52.7	43.2
1919	54.9	49.6	43.8	47.6	50.3	49.1	47.2	48.2	49.7	51.5	56.0	60.0	50.7
1920	61.3	57.8	55.9	56.1	57.6	53.5	51.6	52.0	52.3	54.1	54.3	54.7	55.1
1921	49.0	45.0	42.1	40.4	38.6	29.4	29.0	34.1	36.6	38.2	40.9	41.1	38.7
1922	40.3	34.4	34.7	34.5	34.7	33.5	32.7	33.2	33.5	36.2	38.5	42.0	35.7
1923	43.8	42.3	41.8	41.4	40.3	38.5	37.3	36.8	39.1	41.4	42.9		40.9
1924	44.9	44.4	43.2	40.3	38.3	36.3	37.0	37.7	38.2				

TABLE LXXXI

INDEX NUMBERS OF PRICES PAID TO PRODUCERS OF BUTTER
IN THE UNITED STATES

Corresponding Months, 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	101	103	102	102	103	103	102	101	102	102	101	98	102
1911	98	89	88	89	87	86	89	92	94	92	94	97	91
1912	99	107	105	103	105	106	102	100	98	99	101	102	102
1913	100	101	106	109	109	109	108	106	105	107	106	103	105
1914	103	101	100	98	96	97	100	100	102	101	99	100	100
1915	101	103	103	102	104	106	106	103	99	98	99	98	102
1916	100	101	105	109	113	113	112	111	111	112	116	122	110
1917	120	123	132	132	146	149	146	144	146	151	153	148	141
1918	152	161	168	160	162	164	167	168	168	183	186	186	169
1919	193	182	169	187	204	209	206	204	201	200	210	212	198
1920	216	212	216	221	233	228	225	220	212	210	203	193	215
1921	173	165	163	159	156	125	127	144	148	148	153	145	151
1922	142	126	134	136	140	143	143	141	136	140	144	148	139
1923	154	156	161	163	163	164	163	156	158	161	161	161	160
1924	158	163	167	159	155	154	162	160	155				

From January, 1919, to October, 1921, inclusive, the dealers paid the Milk Producers' Cooperative Marketing Company agreed prices. After deducting the administrative expenses and loss on surplus, the Marketing Company paid the following prices:

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver
1919	3.72	3.46	2.97	2.77	2.42	2.42	2.97	3.48	3.51	3.59	3.56	3.61	3.21
1920	3.56	3.28	2.75	2.61	2.62	2.67	3.10	3.51	3.33	3.33	2.74	2.34	2.99
1921	2.25	2.11	2.11	2.11	1.02	1.84	1.84	2.07	1.35	1.57	*	*	

* November and December, 1921, milk checks were held up. The Company discontinued and when reorganized gave bonds to cover these two months.

TABLE LXXXII

PRICES PAID BY DEALERS FOR 3.5 MILK AT COUNTRY PLANTS IN THE CHICAGO TERRITORY*

Dollars per Hundred Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	1.85	1.77	1.63	1.41	1.17	1.06	1.30	1.45	1.49	1.71	1.85	1.90	1.55
1907	1.55	1.45	1.35	1.30	1.00	.90	1.00	1.20	1.30	1.55	1.65	1.65	1.33
1908	1.65	1.65	1.55	1.35	1.05	.95	1.05	1.25	1.35	1.45	1.55	1.55	1.37
1909	1.55	1.55	1.45	1.40	1.10	.95	1.05	1.25	1.35	1.55	1.70	1.75	1.39
1910	1.75	1.70	1.55	1.45	1.20	1.05	1.20	1.30	1.40	1.70	1.90	2.00	1.52
1911	2.00	1.90	1.70	1.30	1.10	1.00	1.30	1.45	1.45	1.70	1.85	1.90	1.55
1912	1.85	1.80	1.65	1.30	1.05	1.00	1.30	1.45	1.50	1.60	1.75	1.80	1.50
1913	1.75	1.70	1.60	1.50	1.25	1.15	1.35	1.50	1.55	1.75	1.85	1.90	1.57
1914	1.90	1.75	1.65	1.50	1.25	1.10	1.35	1.55	1.55	1.80	1.90	1.90	1.60
1915	1.85	1.75	1.65	1.45	1.20	1.10	1.30	1.55	1.55	1.80	1.90	1.90	1.58
1916	1.85	1.75	1.65	1.65	1.45	1.25	1.55	1.70	1.70	1.90	2.10	2.10	1.72
1917	2.05	2.00	1.85	2.40	2.00	1.60	2.12	2.30	2.30	3.42	3.22	3.22	2.37
1918	3.22	3.07	2.90	2.65	2.05	1.80	2.30	2.75	2.92	3.32	3.68	3.77	2.87
1919	3.76	3.50	3.00	2.80	2.50	2.50	3.00	3.52	3.55	3.63	3.60	3.65	3.25
1920	3.60	3.35	2.90	2.75	2.70	2.75	3.20	3.70	3.70	3.70	3.05	2.60	3.17
1921	2.50	2.35	2.35	2.35	2.05	2.05	2.30	2.30	1.50	1.75	1.80	1.80	2.09
1922	1.80	1.70	1.70	1.70	1.70	1.60	2.00	2.05	2.00	2.05	2.05	2.10	1.87
1923	2.50	2.50	2.40	2.40	2.30	2.25	2.75	2.75	2.75	2.75	2.75	2.75	2.57
1924	2.675	2.675	2.675	2.50	2.30	2.30	2.70	2.75	2.75	2.40			

* Flat price paid up to April 1, 1913, for milk of all test.

April 1, 1913, to October 1, 1915, milk above 3.7 per cent, +2 cents per point; milk below 3.6 per cent, -2 cents per point.

October 1, 1915, to April 1, 1916, 3.6 per cent base, 3 cents per point up or down.

April 1, 1916, to July 1, 1918, 3.5 per cent base, 3 cents per point up or down.

July 1, 1918, to date, 3.5 per cent base, 4 cents per point up or down.

April 1, 1913, to April 1, 1915, 10 cents per 100 pounds added for barn score and cleanliness on sediment test. About 60 per cent of milk at start; increased later.

Fourteen-day strike, January, 1924.

Index numbers of prices paid to producers of 3.5 milk in the Chicago territory by the Milk Producers' Cooperative Marketing Company:

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1919	201	195	182	196	207	228	228	240	236	210	192	190	207
1920	192	185	169	185	224	252	238	242	223	195	148	123	193
1921	122	119	129	150	87	174	142	143	91	92	*	*	

* The 1921 milk checks were held up. The company discontinued business, and when reorganized gave bonds to cover these two months.

TABLE LXXXIII

INDEX NUMBERS OF PRICES PAID BY DEALERS FOR 3.5 MILK
AT COUNTRY PLANTS IN THE CHICAGO TERRITORY

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1907	...	...	...	92	85	85	77	83	87	91	89	87	86
1908	89	93	95	96	90	90	81	86	91	85	84	82	88
1909	84	88	89	99	94	90	81	86	91	91	92	92	90
1910	95	96	95	103	103	99	92	90	94	99	103	105	98
1911	108	107	104	92	94	94	100	100	97	99	100	100	100
1912	100	102	101	92	90	94	100	100	101	94	95	95	97
1913	95	96	98	106	107	108	104	103	104	102	100	100	101
1914	103	99	101	106	107	104	104	107	104	105	103	100	103
1915	100	99	101	103	103	104	100	107	104	105	103	100	102
1916	100	99	101	117	124	118	119	117	114	111	114	111	111
1917	111	113	113	170	171	151	163	159	154	200	174	169	153
1918	174	173	178	188	175	170	177	190	196	194	199	198	185
1919	203	198	184	199	214	236	231	243	238	212	195	192	210
1920	195	189	178	195	231	259	246	255	248	216	165	137	205
1921	135	133	144	167	175	193	177	159	101	102	97	95	135
1922	97	96	104	121	145	151	154	141	134	120	111	111	121
1923	135	141	147	170	197	212	212	190	185	161	149	145	166
1924	145	151	164	177	197	217	208	190	185	140			

TABLE LXXXIV

PRICES PAID TO FARMERS FOR MILK TESTING 3.7 PER CENT AT UTICA, N. Y.*

Dollars per Hundred Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	1.90	1.82	1.68	1.46	1.19	1.07	1.26	1.51	1.59	1.79	1.88	1.91	1.59
1910	1.98	1.93	1.73	1.53	1.23	1.03	1.23	1.68	1.78	1.88	1.98	2.03	1.67
1911	2.03	1.98	1.78	1.43	1.18	1.03	1.23	1.38	1.48	1.78	1.93	1.93	1.60
1912	1.88	1.83	1.68	1.43	1.18	1.03	1.23	1.63	1.63	1.73	1.73	1.83	1.57
1913	1.78	1.68	1.63	1.43	1.18	1.03	1.28	1.38	1.48	1.73	1.83	1.83	1.52
1914	1.81	1.69	1.58	1.46	1.18	1.22	1.34	1.46	1.58	1.81	1.93	1.93	1.58
1915	1.87	1.78	1.69	1.46	1.22	1.22	1.34	1.46	1.58	1.69	1.93	1.93	1.60
1916	1.87	1.81	1.69	1.46	1.34	1.22	1.40	1.58	1.65	2.28	2.39	2.39	1.76
1917	2.34	2.28	2.24	2.22	2.18	2.07	2.27	2.73	2.73	3.31	3.55	3.31	2.60
1918	3.75	3.57	3.45	2.73	2.69	2.03	2.47	2.92	3.12	3.79	4.03	4.28	3.24
1919	4.23	3.77	3.53	3.06	3.32	3.15	3.27	3.39	3.47	3.37	3.59	3.94	3.51
1920	3.95	3.74	3.62	2.81	2.81	3.09	3.21	3.61	3.91	3.91	3.91	3.44	3.50
1921	3.44	2.84	2.35	2.35	1.96	1.67	1.95	2.40	2.49	2.72	2.67	2.64	2.46
1922	2.36	2.22	1.85	1.58½	1.55	1.59½	1.87	2.00½	2.25	2.46	2.71½	3.00	2.12
1923	2.46	2.56	2.38	2.32½	2.07	2.16½	2.23½	2.33½	2.45	2.57	2.58	2.40	2.38
1924	2.17	2.07	2.05	2.00	1.65	1.59	1.67	1.88½	2.09½				

* Prices for Grade B milk.—Since the Dairymen's League has been handling milk the "pool price" is used including certificates of indebtedness.

TABLE LXXXV

INDEX NUMBERS OF PRICES PAID TO FARMERS FOR MILK AT UTICA, N. Y.

Corresponding Months of 1910-14 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	104	106	103	105	103	96	98	111	112	105	105	106	105
1911	107	109	106	98	99	96	98	91	93	99	103	101	101
1912	99	101	100	98	99	96	98	108	103	97	92	96	99
1913	94	92	97	98	99	96	102	91	93	97	97	96	96
1914	95	93	94	100	99	114	106	97	99	101	103	101	99
1915	98	98	101	100	103	114	106	97	99	94	103	101	101
1916	98	99	101	100	113	114	111	105	104	127	127	125	111
1917	123	125	133	152	183	193	180	181	172	185	189	173	164
1918	197	196	205	187	226	190	196	193	196	212	214	224	204
1919	223	207	210	210	279	294	260	225	218	188	191	206	221
1920	208	205	215	192	236	289	255	239	246	218	208	180	220
1921	181	156	140	161	165	156	155	159	157	152	142	138	155
1922	124	122	110	109	130	149	148	133	142	137	144	157	133
1923	129	141	142	159	174	202	177	155	154	144	137	126	150
1924	114	114	122	137	139	149	133	125	132				

TABLE LXXXVI

PRICES PAID TO PRODUCERS OF MILK COWS IN THE UNITED STATES

Dollars per Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	47.25	47.75	48.90	49.42	49.44	49.64	49.04	49.33	49.41	49.84	49.98	50.03	49.17
1910	41.18	40.35	41.75	42.22	42.38	43.46	42.86	42.77	42.68	43.20	43.34	43.41	42.47
1911	44.70	44.48	45.42	44.81	44.54	43.86	42.44	42.26	42.22	42.69	42.70	42.72	43.57
1912	42.89	43.40	44.09	45.14	45.63	45.84	45.41	46.11	46.79	47.30	47.38	48.62	45.72
1913	49.51	51.42	54.02	55.34	54.80	55.20	54.80	54.78	55.78	56.47	57.71	57.19	54.75
1914	57.99	59.09	59.23	59.60	59.85	59.82	59.67	60.72	59.58	59.53	58.77	58.23	59.34
1915	58.47	57.99	58.00	57.78	58.29	58.59	60.31	58.34	58.38	58.76	57.35	56.79	58.25
1916	57.79	57.99	59.51	60.68	60.98	61.63	62.04	61.32	61.41	62.19	62.67	63.18	60.95
1917	63.92	65.93	68.46	72.09	72.78	72.87	72.81	72.53	73.93	75.79	75.00	76.16	71.86
1918	76.54	78.36	80.71	82.45	84.11	84.74	84.97	84.06	85.21	85.41	84.51	85.78	83.07
1919	86.10	86.15	88.15	90.91	92.43	93.84	94.51	94.72	93.42	93.43	93.27	95.54	91.96
1920	94.42	95.27	94.94	95.36	94.56	94.56	91.23	90.50	89.40	85.00	77.56	70.42	89.54
1921	66.82	63.44	65.37	64.35	62.63	59.89	56.55	55.85	54.33	53.39	53.28	53.30	59.10
1922	52.83	53.54	54.87	54.46	54.76	54.87	54.20	52.67	52.79	52.86	51.62	53.21	53.56
1923	54.01	54.15	55.29	56.14	55.91	56.34	56.22	55.45	56.13	55.51	55.39	54.66	55.43
1924	55.57	55.49	55.88	55.92	56.37	56.45	55.46	55.74	55.54				

TABLE LXXXVII

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR COWS IN THE UNITED STATES

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	87	85	85	85	86	88	87	87	86	87	87	87	86
1911	95	93	93	91	90	88	87	86	85	86	85	85	89
1912	91	91	90	91	92	92	93	93	95	95	95	97	93
1913	105	108	110	112	111	111	112	111	113	113	115	114	111
1914	123	124	121	121	121	121	122	123	121	119	118	116	121
1915	124	121	119	117	118	118	123	118	118	118	115	114	118
1916	122	121	122	123	123	124	127	124	124	125	125	126	124
1917	135	138	140	146	147	147	148	147	150	152	150	152	146
1918	162	164	165	167	170	171	173	170	172	171	169	171	169
1919	182	180	180	184	189	189	193	192	189	187	187	191	187
1920	200	200	194	193	191	190	186	183	181	172	155	142	182
1921	141	133	134	130	127	121	115	113	110	107	107	107	120
1922	112	112	112	110	111	111	111	107	107	106	103	106	109
1923	114	113	113	114	113	113	115	112	114	111	111	109	113
1924	118	116	114	113	114	114	113	113	112				

TABLE LXXXVIII

PRICES PAID TO PRODUCERS FOR VEAL CALVES IN THE UNITED STATES

Dollars per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	6.78	6.77	6.92	6.76	6.50	6.77	6.74	6.89	7.03	7.03	6.95	6.92	6.85
1910	6.41	6.28	6.59	6.54	6.30	6.57	6.37	6.29	6.43	6.41	6.39	6.38	6.41
1911	6.50	6.38	6.48	5.96	5.68	5.72	5.74	5.93	6.11	6.15	6.10	5.98	6.06
1912	6.06	6.07	6.11	6.22	6.23	6.33	6.33	6.62	6.83	6.90	6.77	6.88	6.45
1913	7.06	7.23	7.49	7.38	7.17	7.53	7.46	7.53	7.73	7.72	7.70	7.74	7.48
1914	7.89	7.90	7.92	7.68	7.59	7.69	7.80	8.08	8.06	7.97	7.78	7.61	7.83
1915	7.66	7.62	7.50	7.31	7.35	7.53	7.87	7.75	7.89	7.91	7.69	7.61	7.63
1916	7.67	7.87	8.11	8.00	8.08	8.39	8.54	8.59	8.77	8.59	8.60	8.79	8.33
1917	9.15	9.88	9.94	10.49	10.48	10.60	10.77	10.56	11.08	11.10	10.66	10.98	10.47
1918	11.16	11.17	11.33	11.71	11.62	11.88	12.33	12.22	12.57	12.35	11.94	12.31	11.88
1919	12.39	12.18	12.65	12.78	12.11	12.40	13.38	13.43	13.39	12.87	12.65	12.67	12.74
1920	12.89	13.12	12.98	12.72	11.69	11.68	11.44	11.64	11.88	11.64	10.77	9.27	11.81
1921	9.34	9.08	9.05	7.73	7.55	7.43	7.37	7.31	7.67	7.61	7.20	7.14	7.87
1922	7.23	7.84	7.85	7.26	7.28	7.67	7.49	7.67	8.10	8.17	7.92	7.78	7.69
1923	8.05	8.37	8.20	7.78	7.69	7.66	8.00	8.00	8.34	8.37	7.85	7.75	8.01
1924	8.36	8.51	8.43	8.33	8.14	7.91	7.88	7.94	8.09				

TABLE LXXXIX

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR VEAL CALVES
IN THE UNITED STATES

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	95	93	95	97	96	97	95	91	91	91	92	92	94
1911	96	94	94	88	86	84	85	86	87	87	88	86	88
1912	89	90	88	92	95	94	94	96	97	98	97	99	94
1913	104	107	108	109	109	111	111	109	110	110	111	112	109
1914	116	117	114	114	115	114	116	117	115	113	112	110	114
1915	113	113	108	108	112	111	117	112	111	113	111	110	111
1916	113	116	117	118	123	124	127	125	125	122	124	127	122
1917	135	146	144	155	159	157	160	153	158	158	153	159	153
1918	165	165	164	173	176	175	183	177	179	176	172	178	173
1919	183	180	183	189	184	183	199	195	190	183	182	183	186
1920	190	194	188	188	177	173	170	169	169	166	155	135	172
1921	138	134	131	114	115	110	109	106	109	108	104	103	115
1922	107	116	113	107	110	113	111	111	115	116	114	112	112
1923	119	124	118	115	118	114	119	116	119	119	113	112	117
1924	123	126	122	123	125	117	117	115	115				

CHAPTER XVI

BEEF CATTLE

Prices of beef cattle.—For the five years, 1910 to 1914, the farm price of beef cattle in the United States was \$5.31 per hundred-weight. Beef cattle have marked cycles of over- and under-production. Prices were at the low point in 1906 and reached a high purchasing power in 1915. Five years is therefore too short a base period for beef cattle. Using 1910 to 1914 as a base period tends to make the index numbers of prices of beef cattle a little too high.

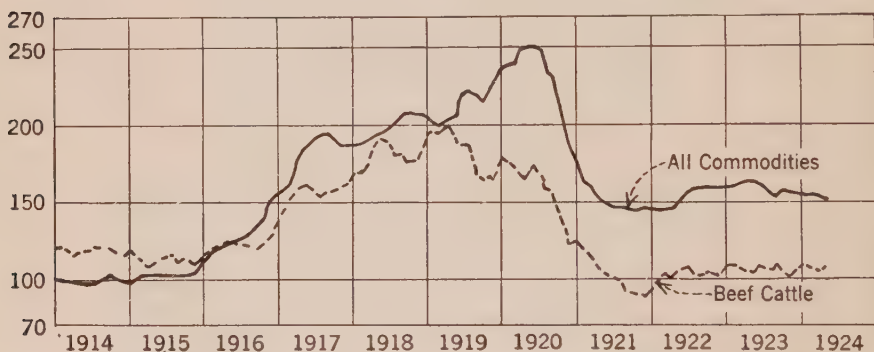


FIG. 71.—Prices paid to farmers for beef cattle, and wholesale prices of all commodities. Beef cattle did not rise in price as much as most commodities, and for three years have been at pre-war prices.

If the prices were available by months it would be better to use 1906 to 1915 as a base.

Cattle prices increased but little in 1915 and 1916. During 1917 and 1918 beef cattle rose rapidly. They averaged \$9.72 per 100 pounds in 1919, and fell to \$4.75 in 1922. Although prices rose during the war, they rose less rapidly than did prices of other things so that the purchasing power declined. With deflation, prices of beef cattle fell much more rapidly than other products and the purchasing power declined with great rapidity and reached 68 in 1923.

Effect of high wages on demand for beef.—When food is very cheap the demand for the choicer types of food is very great. The demand for the poorer grades is low. In 1923 eggs and butter were in demand. The better grades of each sort of food were much more in demand than were the poorer grades. Lamb was high compared with mutton. Nearby hennery white eggs were high compared with poorer grades of eggs.

The Institute of American Meat Packers reported that in September, 1923, wholesale prices of pork loins in Chicago were 60 per cent above pre-war, but sides were 20 per cent below pre-war. Carcass beef from prime native steers was 35 per cent above pre-war; that from medium steers 13 per cent above; and that from cows was 10 per cent below pre-war.

In such erratic times it is difficult to describe the state of agriculture. The farmer who happens to have the favored product may be doing very well unless the supply is abnormal, but the producer of staple foods who is in debt is in severe difficulty.

Prices of beef cattle in different states.—For the two years, 1923 and 1924, the purchasing power of beef cattle averaged 54 in Colorado and 78 in Iowa. This difference was due in part to high handling charges which affected adversely the more distant state. It was even more due to changes in demand. The corn-fed beef cattle make a choicer grade of meat than do cattle from Colorado.

The fact that prices of beef cattle in Colorado on January 1, 1924 were 16 per cent below the five-year pre-war average shows how little value diversified farming that included beef cattle would have been as a solution of the difficulties of the wheat grower in the western states. The two classes of livestock to which the marginal wheat lands are adapted are horses and beef cattle. Both of these products were distinctly lower than wheat.

Cycles of high and low prices of beef cattle.—Prices of cattle other than dairy cows were high compared with other commodities in 1885. They were again high in 1899 and in 1915. The low points were 1891, 1906, and again in 1923. The periods of rising or falling prices varied from six to nine years and averaged nearly eight years. The period of rising purchasing power that ended in 1915 lasted nine years and the decline that then began lasted eight years.

Presumably the prices of beef cattle will rise, compared with other things, for a period of about eight years. Probably they will

reach average prices by about 1928 and be more profitable than the average from 1928 to 1936 with the peak about 1932. This means that if the general price level falls, beef cattle will fall less rapidly or may rise in price, and that if the general price level rises, beef cattle will rise more rapidly. Since sheep are profitable, the competition of sheep with beef cattle may be expected to be very keen for the next few years.

Following the Civil War, there was a considerable period of low prices for beef cattle. The purchasing power did not turn upward

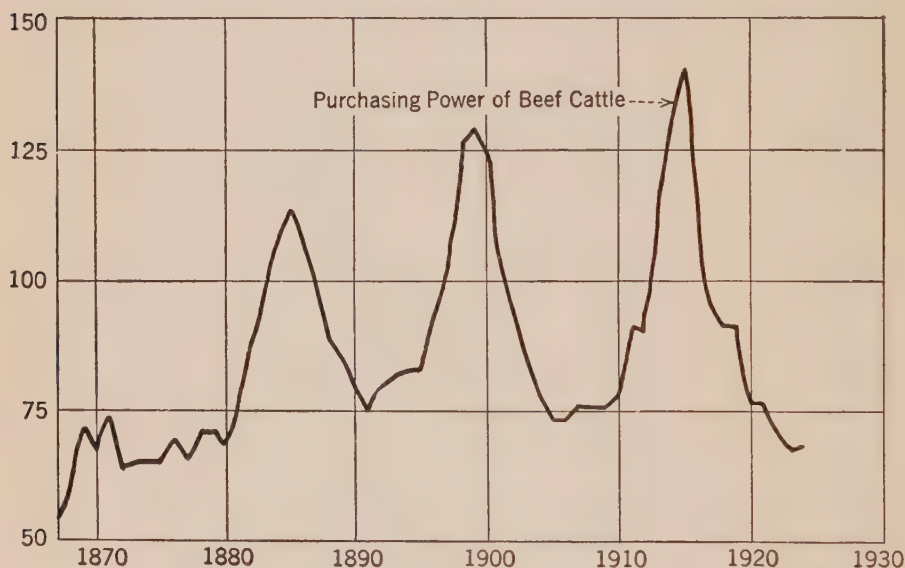


FIG. 72.—Purchasing power of beef cattle. In 1923 and 1924 they had a lower purchasing power than at any other time since the Civil War period. Beef cattle have distinct periods of high and low prices, each lasting about 8 years.

distinctly until 1881. It is possible that deflation may have some influence that is particularly unfavorable for beef, but it seems more probable that the regular cycles will continue. Apparently the cycles of over- and under-production are so dominant as to have gone on for the last thirty-eight years as the dominating factor.

When there are too few hogs, those that are on hand are grown to a larger size so that the full effect of the shortage is not apparent. When the supply is too high, they are marketed at a lighter weight so that the oversupply is somewhat alleviated. There is less lee-

way with beef cattle and the cycles are more dominant. But even with cattle some variation in size is possible and in times of very serious over-production the cows can be eaten. The leeway with horses is still less as they are not used for food.

The number of cattle other than dairy cows on January 1, 1907 was 52 million. It decreased to 36 million on January 1, 1914. This striking decrease resulted in high prices, which reached a peak in 1915. The high prices resulted in an increase in numbers to 45 million on January 1, 1919. The low purchasing power is resulting in a decrease in numbers. On January 1, 1924, there were only 42 million.

Cycles of governmental interest in beef cattle.—The dimin-

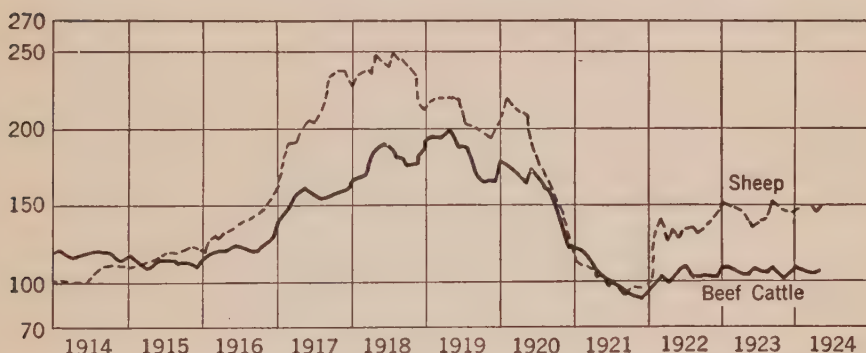


FIG. 73.—Prices paid to farmers for sheep and for beef cattle. Cattle have been low, relative to sheep, for all of the war period except the year 1921.

ished supply and high prices of beef led to governmental investigation of the beef situation. As is usual, such interest came about the time when the tide turned. The interest manifested in this problem is indicated by the statements in three annual reports to the President, by the Secretary of Agriculture, David F. Houston.

“In December, 1913 a committee of experts was appointed to make a thorough survey of the meat situation. As a result of this study, the department recently issued a series of illuminating reports. They furnish information of value not only to the public but also to the department and suggest more definitely the lines of attack which the department should follow in its efforts to increase the meat supply.”¹

¹ Report of the Secretary, Yearbook of the United States Department of Agriculture, p. 21, 1916.

"The experts of the Bureau of Animal Industry have intelligently and zealously prosecuted their tasks, but it remains true that this country faces a serious situation in the matter of its meat supply. Just what factors have brought this situation about no one can define with certainty, and no systematic attempt to define them has been made until recently. Realizing the urgency of the problem, I have appointed a committee, consisting of the best authorities I could discover, to study the subject. This committee is making a survey of the whole field and will report at the earliest practicable moment. Its study embraces an investigation of production and consumption and of the methods of producing, finishing, and marketing meat. When a conclusion is reached, such measures as may be helpful for increasing production and bettering distribution will be inaugurated."²

"In the last annual report particular attention was called to the desirability of increasing the number of meat animals. The department has given added attention to this problem and has extended its activities as far as available funds permitted. The farmer who keeps only enough animals to supply meat to his family, as well as the large ranch owner, has received assistance. The attention of the single-crop farmer has been directed to the need of diversification and the introduction of live stock as essential to a sound agricultural economy. That more beef animals should be produced in the settled areas of the country, particularly in the South, is beyond question. In many sections the feeding of beef cattle is one of the best means of utilizing rough feed and of supplying stable manure for crops."³

"To increase the meat production of the United States has been one of the principal aims of the department in recent years. This can not be accomplished in a day, but requires steady constructive effort over a period of years."⁴

The government was in doubt about the factors that brought about the shortage of beef, but in the conclusion that it takes a "period of years" to increase the meat supply, it was correct. The real reason for the high price of beef at that time was the eight

² Report of the Secretary, Yearbook of the United States Department of Agriculture, p. 15, 1914.

³ Report of the Secretary, Yearbook of the United States Department of Agriculture, p. 16, 1915.

⁴ Report of the Secretary, Yearbook of the United States Department of Agriculture, p. 21, 1916.

years of low prices that had preceded. The present low prices are due to the eight years of high prices. The government reports from 1914 to 1916 were a dangerous kind of literature for the beef producer, because they were likely to lead him to increase production at the very time when too great an expansion was taking place. They are safe reading at the present time. The writers commend them to the beef cattle raiser who has finished closing his year's accounts.

The high supply and low price of beef in 1924 have led to apathy on the part of the public. The public was then interested in expanding the dairy industry, an industry farmers were already expanding. About 1932 it is to be expected that the public will again be interested in an investigation of the beef industry, as it will be sufficiently curtailed so that the public will realize there is such an industry.

If the government is to attempt to influence production it should be studying the beef cattle industry in 1924 when the industry is prostrated, rather than in the period when the price will be too stimulating without any outside help. In 1924, the production of

TABLE XC

PRICES PAID TO PRODUCERS FOR BEEF CATTLE IN THE UNITED STATES

Dollars per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	5.04	5.11	5.29	5.50	5.50	5.44	5.33	5.36	5.35	5.32	5.21	5.22	5.31
1910	4.71	4.64	4.87	5.31	5.23	5.20	4.84	4.64	4.65	4.64	4.48	4.45	4.81
1911	4.58	4.57	4.66	4.67	4.59	4.43	4.28	4.39	4.43	4.32	4.36	4.37	4.47
1912	4.46	4.61	4.75	5.15	5.36	5.23	5.17	5.37	5.35	5.36	5.22	5.33	5.11
1913	5.40	5.55	5.88	6.08	6.01	6.02	5.98	5.91	5.92	6.05	5.99	5.96	5.90
1914	6.04	6.16	6.28	6.29	6.33	6.32	6.38	6.47	6.38	6.23	6.02	6.01	6.24
1915	5.99	5.93	5.92	5.96	6.13	6.20	6.07	6.18	6.06	6.04	5.85	5.75	6.01
1916	5.85	5.99	6.37	6.66	6.73	6.91	6.78	6.51	6.55	6.37	6.44	6.56	6.48
1917	6.86	7.36	7.91	8.57	8.70	8.65	8.30	8.17	8.40	8.35	8.21	8.24	8.14
1918	8.33	8.55	8.85	9.73	10.38	10.40	10.07	9.71	9.63	9.33	9.14	9.28	9.45
1919	9.65	10.02	10.34	10.81	10.84	10.20	9.96	9.82	9.02	8.65	8.65	8.63	9.72
1920	8.99	8.98	9.08	9.20	8.97	9.32	8.93	8.56	8.29	7.77	7.15	6.36	8.47
1921	6.32	6.02	6.36	6.08	5.98	5.65	5.40	5.39	4.98	4.81	4.69	4.62	5.53
1922	4.75	5.07	5.46	5.53	5.70	5.84	5.76	5.51	5.44	5.48	5.29	5.28	5.43
1923	5.51	5.55	5.62	5.78	5.77	5.82	5.72	5.60	5.70	5.48	5.23	5.26	5.59
1924	5.38	5.47	5.63	5.82	5.94	5.79	5.65	5.67	5.53				

eggs and dairy products was much more profitable than most other farm products. Since prices were high, governmental agencies became interested in increasing the production of these. The government should be interested in beef cattle and horses in 1924, as the production of beef is so unprofitable that a serious shortage is practically certain to develop, but governments represent consumers, and consumers consider the world to be in its normal state when any given product is exceedingly cheap, the cheaper the better. Formerly men did not miss the water till the well ran dry. To-day the public is not interested in water so long as the pressure in the faucet is high.

TABLE XCI

INDEX NUMBERS OF PRICES PAID TO PRODUCERS OF BEEF CATTLE IN THE
UNITED STATES

Corresponding Months, 1910-14 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	93	91	92	97	95	96	91	87	87	87	86	85	91
1911	91	89	88	85	83	81	80	82	83	81	84	84	84
1912	88	90	90	94	97	96	97	100	100	101	100	102	96
1913	107	109	111	111	109	111	112	110	111	114	115	114	111
1914	120	121	119	114	115	116	120	121	119	117	116	115	118
1915	119	116	112	108	111	114	114	115	113	114	112	110	113
1916	116	117	120	121	122	127	127	121	122	120	124	126	122
1917	136	144	150	156	158	159	156	152	157	157	158	158	153
1918	165	167	167	177	189	191	189	181	180	175	175	178	178
1919	191	196	195	197	197	188	187	183	169	163	166	165	183
1920	178	176	172	167	163	171	168	160	155	146	137	122	160
1921	125	118	120	111	109	104	101	101	93	90	90	89	104
1922	94	99	103	101	104	107	108	103	102	103	102	101	102
1923	109	109	106	105	105	107	107	104	107	103	100	101	105
1924	107	107	106	106	108	106	106	106	103				

TABLE XCII

FARM VALUE AND PURCHASING POWER OF BEEF CATTLE (CATTLE OTHER THAN DAIRY COWS) IN THE UNITED STATES *

Year	Value per Head in Currency Jan. 1	Index Number of Value per Head (1910-1914=100)	Purchasing Power (1910-1914=100)	Year	Value per Head in Currency Jan. 1	Index Number of Value per Head (1910-1914=100)	Purchasing Power (1910-1914=100)
1867	\$21.32	90	53	1896	\$15.86	67	96
1868	20.93	88	59	1897	16.65	70	103
1869	25.47	108	72	1898	20.92	88	126
1870	22.59	95	67	1899	22.79	96	130
1871	23.07	98	74	1900	24.73	105	125
1872	19.75	83	63	1901	19.93	84	104
1873	20.41	86	65	1902	18.76	79	94
1874	19.48	82	65	1903	18.45	78	87
1875	19.11	81	65	1904	16.32	69	78
1876	19.21	81	70	1905	15.15	64	74
1877	16.95	72	65	1906	15.85	67	74
1878	17.05	72	71	1907	17.10	72	76
1879	15.38	65	71	1908	16.89	71	76
1880	16.57	70	68	1909	17.49	74	76
1881	17.33	73	77	1910	19.07	81	78
1882	19.09	84	88	1911	20.54	87	92
1883	21.81	92	96	1912	21.20	90	91
1884	23.52	99	108	1913	26.36	111	109
1885	23.25	98	114	1914	31.13	132	132
1886	21.17	89	107	1915	33.38	141	141
1887	19.79	84	101	1916	33.53	142	123
1888	17.79	75	89	1917	35.88	152	97
1889	17.05	72	86	1918	40.88	173	92
1890	15.63	66	79	1919	44.22	187	92
1891	14.76	62	75	1920	43.21	183	77
1892	15.16	64	80	1921	31.36	133	77
1893	15.24	64	82	1922	23.80	101	72
1894	14.66	62	83	1923	25.67	108	68
1895	14.06	59	83	1924	24.99	106	69

* Prices as reported by the Department of Agriculture are converted to currency during the Civil War period by using the premiums on gold as given by the Treasury Department. The index number of wholesale prices is on a currency basis; therefore the prices of beef cattle are reduced to a currency basis.

Purchasing power is calculated by dividing the price index by the index number of wholesale prices for January 1. For years before 1900 a January number is not available. The yearly average for the year and preceding year is then used.

CHAPTER XVII

SHEEP AND WOOL

Prices paid to producers for wool.—Wool always rises very high during a war period for the reason that there is a very high demand for soldiers' clothing and blankets, and the supply of wool can not be increased suddenly. For three years wool sold for about three times the pre-war price. When deflation came, the price of wool fell from nearly three times the pre-war price to less than pre-

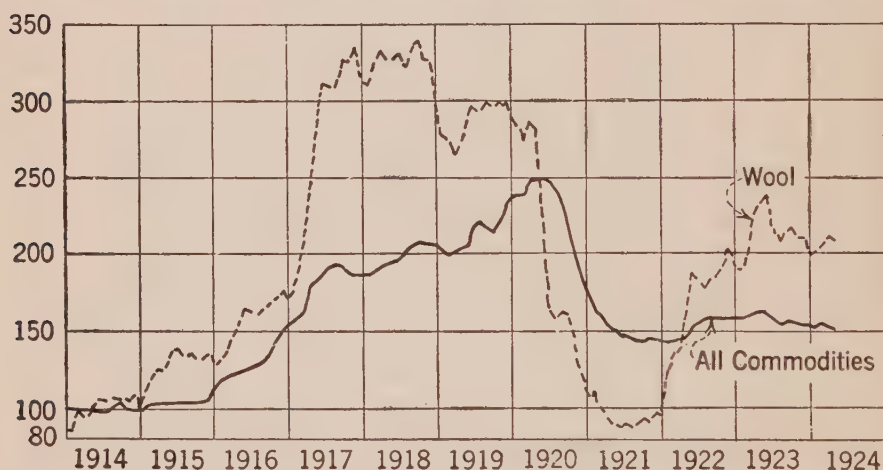


FIG. 74.—Prices paid to farmers for wool, and wholesale prices of all commodities. Wool rose higher and fell lower than most other commodities. With the high wages and tariff, it again rose in price.

war. The peak of consumption occurred in January, 1920, after which it steadily declined. The decline in consumption, due to unfavorable business conditions, and the large supply of wool in the world combined to depress the price. It has been estimated that in 1920 the world had two years' supply of wool. In 1921 the farmers received less than the pre-war price. With full employment and a protective tariff, prices rose rapidly and for the years 1923 and 1924 prices were double the pre-war.

Prices paid for sheep and lambs.—Sheep and lambs followed the price of wool, but usually lagged somewhat. For the year, 1921, wool and sheep were below pre-war prices, and sheep growers were

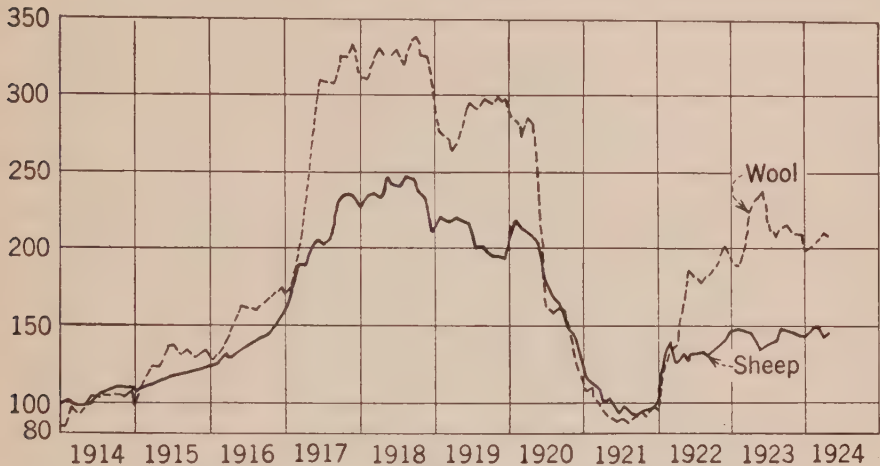


FIG. 75.—Prices paid to farmers for sheep and for wool.

as pessimistic as they were optimistic before and after that date. Mortgages were foreclosed on many range flocks. In 1923 and 1924, the full employment at high wages created a strong demand for lambs as food, and the high price of wool tended to keep the lambs

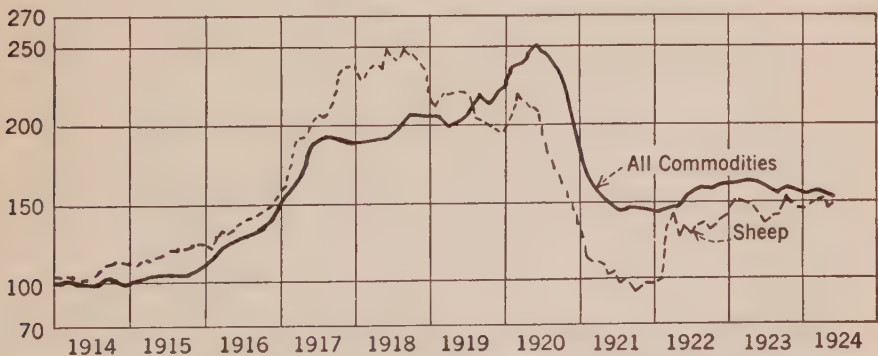


FIG. 76.—Prices paid to farmers for sheep, and wholesale prices of all commodities.

on the farms. As a result, the price of lambs was much higher than the price of sheep.

Civil War prices of wool.—During the Civil War, wool rose very high in price but, after the war closed, it fell far below the

general price level, and remained low for five years. During the World War wool rose much higher in price and fell much more precipitously, but recovered much more promptly.

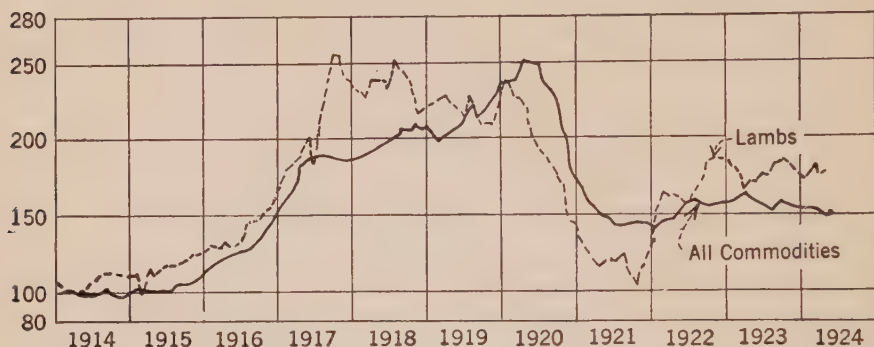


FIG. 77.—Prices paid to farmers for lambs, and wholesale prices of all commodities.

The number of sheep was rapidly decreased in 1921. With the recovery of wool prices the number increased and would have increased much more rapidly had farmers been sure that the tariff

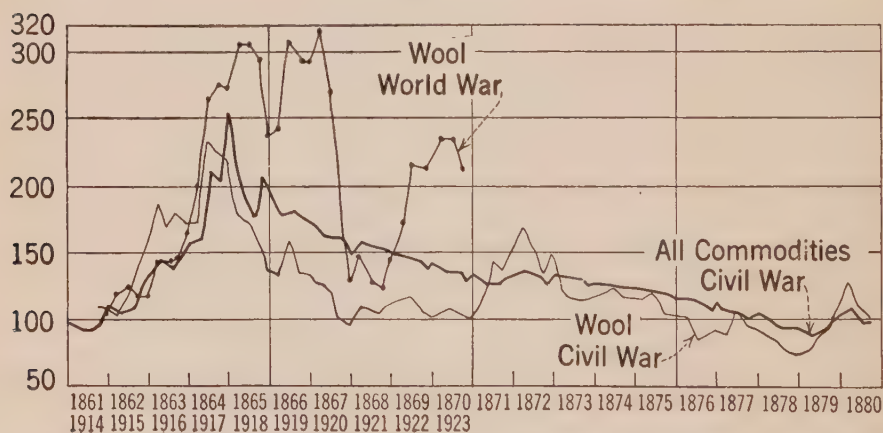


FIG. 78.—Civil War and World War prices of wool. In each war, the price of wool rose very high and later fell very low. After the Civil War, the recovery was less than after the World War.

on wool would be maintained. Previous experience has shown that the nation has no permanent policy on this question.

Prices of wool and cotton.—Wool being a special war need rose in price more than did cotton, but the prices of the two, being

equally affected by industrial conditions, followed much the same course after the war closed.

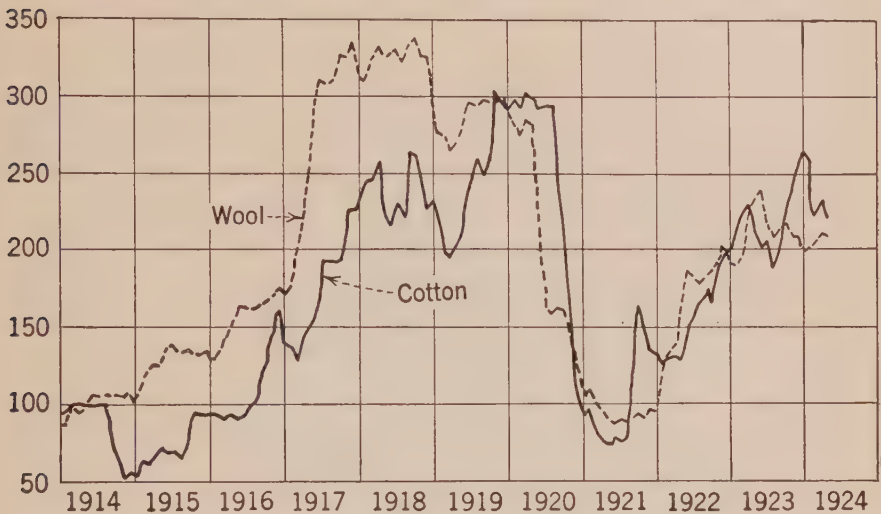


FIG. 79.—Prices paid to farmers for wool and for cotton.

TABLE XCIII

PRICES PAID TO PRODUCERS FOR UNWASHED WOOL IN THE UNITED STATES

Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	18.5	18.5	18.7	18.0	17.8	17.5	17.5	17.8	17.3	17.1	17.2	17.3	17.8
1910	24.5	24.6	24.9	22.3	22.8	19.5	19.0	19.5	17.7	18.1	17.9	17.8	20.7
1911	17.3	17.3	16.8	15.7	14.7	15.5	15.4	16.0	15.6	15.5	15.6	15.5	15.9
1912	16.2	16.3	16.9	17.3	17.8	18.7	18.9	18.8	18.7	18.5	18.6	18.6	17.9
1913	18.6	18.7	18.4	17.7	16.3	15.6	15.9	15.8	15.8	15.5	15.6	16.1	16.7
1914	15.7	15.7	16.4	16.8	17.2	18.4	18.5	18.7	18.6	18.0	18.1	18.6	17.6
1915	18.6	20.2	22.8	22.7	22.0	23.7	24.2	23.8	23.3	22.7	22.7	23.3	22.5
1916	23.3	24.2	25.9	26.3	28.0	28.7	28.6	29.0	28.4	28.7	29.4	30.8	27.6
1917	31.8	32.7	36.7	38.8	43.7	49.8	54.3	54.8	54.2	55.5	55.9	58.2	47.2
1918	58.1	57.1	60.0	60.0	58.2	57.4	57.5	57.4	57.7	57.7	56.4	56.2	57.8
1919	55.2	51.1	51.3	47.9	48.0	50.5	51.8	52.2	51.3	50.6	51.0	51.6	51.0
1920	53.3	52.5	51.5	51.3	50.3	38.6	29.5	28.3	28.0	27.5	24.9	21.9	38.1
1921	19.6	19.8	18.9	17.9	16.0	15.4	15.5	15.4	15.5	15.8	15.6	16.9	16.9
1922	18.0	22.3	25.0	24.8	29.0	32.8	32.5	31.6	31.6	32.2	33.2	35.3	29.0
1923	35.3	35.3	37.3	39.2	41.7	41.5	38.3	37.0	37.1	36.9	36.4	36.2	37.7
1924	36.6	37.5	38.2	38.4	37.4	36.0	34.3	33.5	35.5				

TABLE XCIV

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR WOOL IN THE UNITED STATES
CORRESPONDING MONTHS OF 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	132	133	133	124	128	111	109	110	102	106	104	103	116
1911	94	94	90	87	83	89	88	90	90	91	91	90	89
1912	88	88	90	96	100	107	108	106	108	108	108	108	101
1913	101	101	98	98	92	89	91	89	91	91	91	93	94
1914	85	85	98	93	97	105	106	105	108	105	105	108	99
1915	101	109	122	126	124	135	138	134	135	133	132	135	126
1916	126	131	139	146	157	164	163	163	164	168	171	178	155
1917	172	177	196	216	246	285	310	308	313	325	325	336	265
1918	314	309	321	333	327	328	329	322	334	337	328	325	325
1919	298	276	274	266	270	289	296	293	297	296	297	298	287
1920	288	284	275	285	283	221	169	159	162	161	145	127	214
1921	106	107	101	99	90	88	89	87	90	92	91	98	95
1922	97	121	134	138	163	187	186	178	183	188	193	204	163
1923	191	191	199	218	234	237	219	208	214	216	212	209	212
1924	198	203	204	213	210	206	196	188	205				

TABLE XCV

PRICES PAID TO PRODUCERS FOR SHEEP IN THE UNITED STATES

Dollars per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	4.60	4.55	4.79	5.07	4.96	4.75	4.56	4.42	4.37	4.30	4.26	4.37	4.58
1910	5.63	5.09	5.64	6.10	5.79	5.44	5.47	4.68	4.81	4.68	4.63	4.54	5.21
1911	4.47	4.34	4.45	4.55	4.51	4.24	4.19	3.98	3.91	3.68	3.65	3.71	4.14
1912	3.89	4.01	4.12	4.57	4.74	4.52	4.21	4.26	4.11	4.19	4.05	4.21	4.24
1913	4.35	4.63	4.97	5.16	4.91	4.84	4.20	4.32	4.23	4.16	4.27	4.46	4.54
1914	4.67	4.67	4.77	4.96	4.87	4.70	4.75	4.87	4.80	4.81	4.68	4.95	4.79
1915	4.95	5.14	5.36	5.60	5.54	5.43	5.35	5.16	5.06	5.18	5.18	5.38	5.28
1916	5.52	5.90	6.35	6.61	6.66	6.54	6.33	6.22	6.25	6.20	6.41	6.77	6.31
1917	7.33	8.17	9.21	9.69	10.15	9.84	9.32	9.33	10.05	10.24	10.20	10.44	9.50
1918	10.55	10.75	11.41	11.98	12.32	11.56	11.04	10.99	10.79	10.35	10.11	9.46	10.94
1919	9.68	9.95	10.45	11.33	10.93	10.34	9.25	9.06	8.69	8.46	8.35	8.53	9.50
1920	9.34	9.97	10.25	10.66	10.34	9.13	8.21	7.54	7.24	6.62	6.20	5.54	8.42
1921	5.30	5.01	5.27	5.11	5.11	4.74	4.34	4.38	4.11	3.96	3.84	4.10	4.61
1922	4.57	5.71	6.51	6.43	6.65	6.09	6.11	5.98	5.70	5.93	6.02	6.27	6.00
1923	6.88	6.83	7.06	7.20	6.92	6.43	6.43	6.22	6.57	6.33	6.20	6.39	6.62
1924	6.71	6.82	7.22	7.45	7.33	7.09	6.60	6.32	6.30				

TABLE XCVI

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR SHEEP IN THE UNITED STATES
CORRESPONDING MONTHS OF 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	122	112	118	120	117	115	120	106	110	109	109	104	114
1911	97	95	93	90	91	89	92	90	89	86	86	85	90
1912	85	88	86	90	96	95	92	96	94	97	95	96	93
1913	95	102	104	102	99	102	92	98	97	97	100	102	99
1914	102	103	100	98	98	99	104	110	110	112	110	113	105
1915	108	113	112	110	112	114	117	117	116	120	122	123	115
1916	120	130	133	130	134	138	139	141	143	144	150	155	138
1917	159	180	192	191	205	207	204	211	230	238	239	239	207
1918	229	236	238	236	248	243	242	249	247	241	237	216	239
1919	210	219	218	223	220	218	203	205	199	197	196	195	209
1920	203	219	214	210	208	192	180	171	166	154	146	127	184
1921	115	110	110	101	103	100	95	99	94	92	90	94	101
1922	99	125	136	127	134	128	134	135	130	138	141	143	131
1923	150	150	147	142	140	135	141	141	150	147	146	146	145
1924	146	150	151	145	148	149	145	143	144				

TABLE XCVII

PRICES PAID TO PRODUCERS OF LAMBS IN THE UNITED STATES

Dollars per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	5.79	5.95	6.22	6.46	6.46	6.30	6.09	5.66	5.63	5.50	5.47	5.68	5.93
1910	5.82	6.62	7.37	7.47	7.26	7.13	6.71	5.70	5.85	5.78	5.54	5.60	6.40
1911	5.71	5.44	5.49	5.77	5.74	5.51	5.42	5.29	5.02	4.68	4.68	4.93	5.30
1912	5.22	5.15	5.38	5.98	6.16	6.02	5.74	5.60	5.49	5.42	5.37	5.70	5.60
1913	6.03	6.34	6.56	6.59	6.66	6.36	6.05	5.50	5.51	5.51	5.64	5.85	6.05
1914	6.16	6.18	6.31	6.47	6.49	6.47	6.55	6.26	6.27	6.09	6.14	6.33	6.31
1915	6.47	6.67	6.06	7.35	7.32	7.26	7.21	6.70	6.71	6.70	6.76	7.02	6.85
1916	7.29	7.78	8.10	8.58	8.49	8.36	8.16	8.15	8.22	8.02	8.41	8.72	8.19
1917	9.59	10.51	11.46	12.03	12.51	12.64	11.19	12.08	13.06	14.09	13.79	13.81	12.23
1918	13.83	13.77	14.11	15.34	15.39	14.98	14.20	14.20	13.73	13.20	12.54	12.44	13.98
1919	12.71	13.17	14.03	14.61	14.34	13.89	13.09	12.91	12.25	11.47	11.45	11.85	12.98
1920	12.91	14.08	14.17	14.63	14.26	12.82	11.79	10.84	10.31	9.65	9.37	8.46	11.94
1921	8.44	7.76	7.90	7.55	7.78	7.59	7.37	6.99	6.27	5.98	6.12	6.60	7.20
1922	7.33	8.87	10.21	10.54	10.39	9.87	9.55	9.39	9.43	10.06	10.30	10.49	9.70
1923	10.69	10.83	11.01	10.69	11.00	10.72	10.60	9.96	10.28	10.17	10.01	10.10	10.51
1924	10.19	10.53	11.22	11.32	11.43	11.21	10.50	10.15	10.18				

TABLE XCVIII

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR LAMBS IN THE UNITED STATES
CORRESPONDING MONTHS OF 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	101	111	118	116	112	113	110	101	104	105	101	99	108
1911	99	91	88	89	89	87	89	93	89	85	86	87	89
1912	90	87	86	93	95	96	94	99	98	99	98	100	94
1913	104	107	105	102	103	101	99	97	98	100	103	103	102
1914	106	104	101	100	100	103	108	111	111	111	112	111	106
1915	112	112	97	114	113	115	118	118	119	122	124	124	116
1916	126	131	130	133	131	133	134	144	146	146	154	154	138
1917	166	177	184	186	194	201	184	213	232	256	252	243	206
1918	239	231	227	237	238	238	233	251	244	240	229	219	236
1919	220	221	226	226	222	220	215	228	218	209	209	209	219
1920	223	237	228	226	221	203	194	192	183	175	171	149	201
1921	146	130	127	117	120	120	121	123	111	109	112	116	121
1922	127	149	164	163	161	157	157	166	167	183	188	185	164
1923	185	182	177	165	170	170	174	176	183	185	183	178	177
1924	176	177	180	175	177	178	172	179	181				

TABLE XCIX—WHOLESALE PRICES OF WOOL—CIVIL WAR AND WORLD WAR

Ohio Washed Fleece Wool, New York*			Ohio Fine Unwashed Wool, Boston†		
Year	Price per Pound	Index Number	Year	Price per Pound	Index Number
Average, October, 1856 to July, 1861:	Cents		Average, 1910-1914:	Cents	
January.....	45.40	100	January.....	24	100
April.....	44.16	100	April.....	22	100
July.....	41.48	100	July.....	22	100
October.....	44.86	100	October.....	23	100
1861: October.....	48.3	108	1915: January.....	25	104
1862: January.....	49.3	109	April.....	26	118
April.....	44.7	101	July.....	27	123
July.....	46.7	113	October.....	27	117
October.....	61	136	1916: January.....	28	117
1863: January.....	71	156	April.....	31	141
April.....	81.7	185	July.....	31	141
July.....	70	169	October.....	33	143
October.....	80.3	179	1917: January.....	39	163
1864: January.....	78	172	April.....	44	200
April.....	75.7	171	July.....	58	264
July.....	96.7	233	October.....	63	274
October.....	99.3	221	1918: January.....	65	271
1865: January.....	99.3	219	April.....	67	305
April.....	78.3	177	July.....	67	305
July.....	71.0	171	October.....	67	291
October.....	71.7	160	1919: January.....	57	238
1866: January.....	61.7	136	April.....	53	241
April.....	57.7	131	July.....	68	309
July.....	65.7	158	October.....	67	291
October.....	59.7	133	1920: January.....	70	292
1867: January.....	60.3	133	April.....	70	318
April.....	55	124	July.....	57	259
July.....	49.7	120	October.....	42	183
October.....	44.7	100	1921: January.....	31	129
1868: January.....	43	95	April.....	32	145
April.....	47.7	108	July.....	28	127
July.....	44.7	108	October.....	28	122
October.....	47	105	1922: January.....	34	142
1869: January.....	49.3	109	April.....	38	173
April.....	49.3	112	July.....	47	214
July.....	47.7	115	October.....	49	213
October.....	47.3	105	1923: January.....	52	217
1870: January.....	46	101	April.....	51	232
April.....	47	106	July.....	51	232
July.....	44.7	108	October.....	49	213
October.....	46.7	104			
1871: January.....	45.3	100			
April.....	49.7	113			
July.....	59	142			
October.....	61	136			
1872: January.....	69.3	153			
April.....	78.7	178			
July.....	69	166			
October.....	61	136			
1873: January.....	67.7	149			
April.....	52.3	118			
July.....	47.3	114			
October.....	51.3	114			
1874: January.....	53	117			
April.....	53	120			
July.....	50.7	122			
October.....	51.7	115			
1875: January.....	52.7	116			
April.....	50.7	115			
July.....	49	118			
October.....	46.7	104			
1876: January.....	47.3	104			
April.....	45	102			
July.....	34.7	84			
October.....	39.3	88			
1877: January.....	41.7	92			
April.....	39.3	89			
July.....	43.7	105			
October.....	42.7	95			
1878: January.....	42.3	93			
April.....	39.3	89			
July.....	34.7	84			
October.....	34.7	77			
1879: January.....	33.7	74			
April.....	33	75			
July.....	36.3	88			
October.....	40.7	91			
1880: January.....	51.0	112			
April.....	55.7	126			
July.....	45.3	109			
October.....	45.3	101			

* Wholesale prices, wages, and transportation. Report by Mr. Aldrich, from the Committee on Finance, March 3, 1893. Senate Report No. 1394, Fifty-second Congress, second session, Part II.

† As reported by the United States Department of Agriculture.

CHAPTER XVIII

POULTRY AND EGGS

Prices of eggs.—When inflation was taking place during the war period, wages lagged behind prices and consumers economized on eggs. Prices of eggs, therefore, rose less rapidly than most farm products. Prices of grain rose much more rapidly than eggs so that the poultry business was severely depressed. The census of New York State showed the total number of hens decreased from 10,700,000 in April, 1917, to 8,900,000 in February, 1918. The

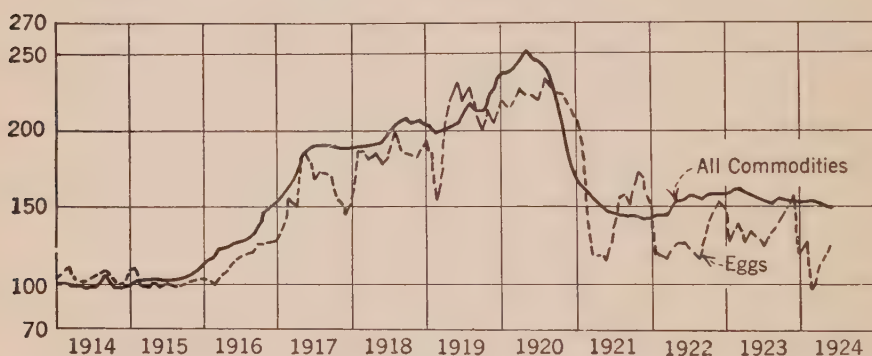


FIG. 80.—Prices paid to farmers for eggs, and wholesale prices of all commodities. Eggs rose less rapidly than most commodities. After the war, egg prices fell more rapidly than the general price level, but fell less rapidly than the prices of most foods.

depression in the poultry business was so severe that the Food Administration promulgated regulations forbidding the killing of any hens. When deflation occurred and prices for grain fell very low, eggs remained higher. For three years the industry was highly profitable. The expansion of the business is shown by the data in Table C. From 1920 to 1924, the number of chickens in the United States increased one-third.

Relation of prices of eggs to prices of feed.—At farm prices, as a five-year average before the war, 4.1 dozen eggs or 7.7 pounds of poultry would buy a bushel of wheat. In 1923 it required only

TABLE C

EXPANSION OF THE POULTRY INDUSTRY IN THE UNITED STATES

From Reports of the United States Department of Agriculture

Year	Number of Chickens, January 1	Number of Chickens Raised	Dozens of Eggs Produced
1919	.....	473,000,000	1,645,000,000
1920	373,000,000	475,000,000	1,647,000,000
1921	371,000,000	550,000,000	1,888,000,000
1922	423,000,000	579,000,000	1,971,000,000
1923	440,000,000	654,000,000	2,196,000,000
1924	492,000,000		

3.3 dozen eggs or 5.2 pounds of poultry. Naturally this resulted in a great wave of interest in poultry. It is, of course, not to be

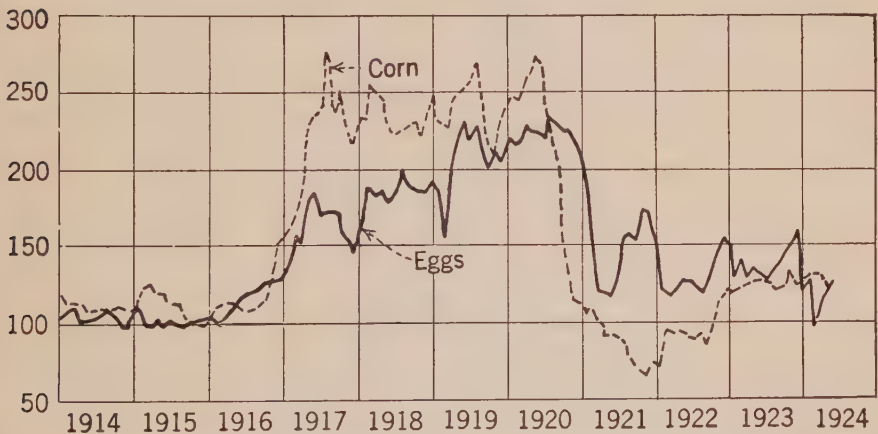


FIG. 81.—Prices paid to farmers for corn and for eggs. For four years, feed was so high compared with eggs as to depress the poultry business. Conditions were then reversed, and for three years eggs were higher than feed. In 1924, feed is likely to be as high as eggs.

expected that any such favorable ratios of eggs to feed will continue. The ratio for 1924 will be much less favorable for poultry.

Great losses are certain to occur by the promiscuous and ill-advised entry into this industry in the expectation that the abnormal ratios of feed to product will continue. Fortunately, for those who follow poultry production as a regular business the losses from roup,

chicken-pox and neglect are so serious as to eliminate much of the unwise competition of those who rush from one industry to another,

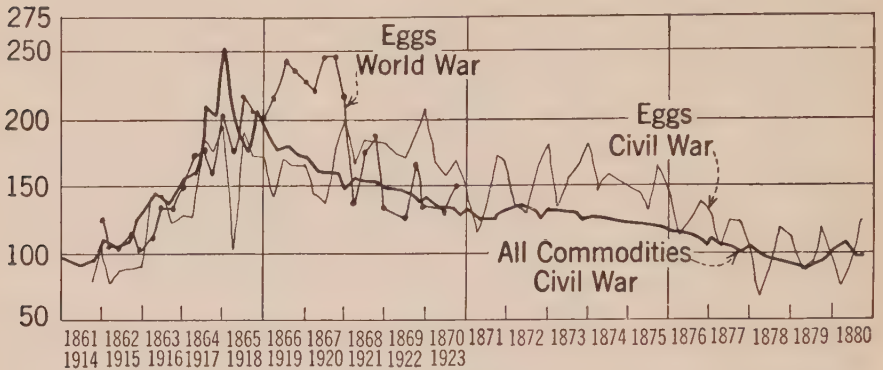


FIG. 82.—Civil War and World War prices of eggs, and prices of all commodities for the Civil War period.

usually arriving just in time to help break the market and themselves. With wages high and food cheap, the outlook for production of the best grades of nearby hennery white eggs is better than the out-

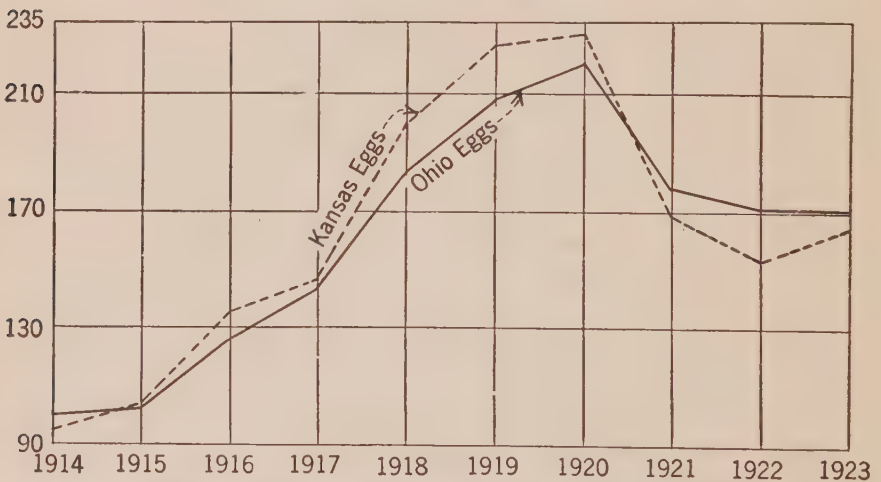


FIG. 83.—Prices paid to farmers for eggs in Kansas and in Ohio. When prices rose, they rose more in the more distant state; when prices fell, they fell more.

look for western production of eggs that go through cold storage. The outlook for the man who ships his own eggs is better than for the one who must pay many intermediate handlers.

Prices of eggs during the Civil War and World War periods.—The longtime tendency in the price of eggs in a period of deflation will probably be for egg prices to hold up better than most food

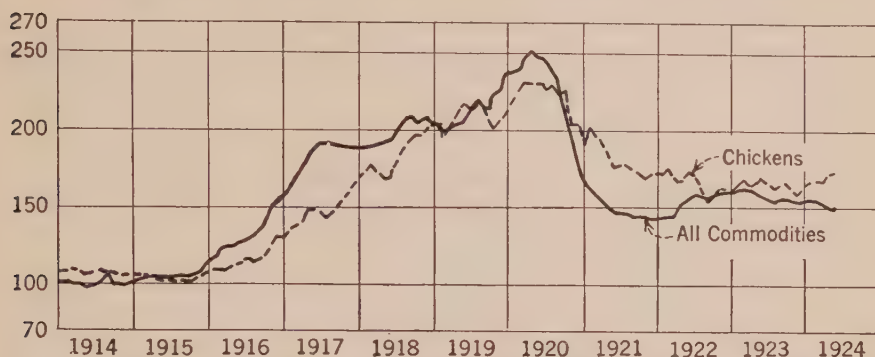


FIG. 84.—Prices paid to farmers for chickens, and wholesale prices of all commodities. When prices were rising and wages were relatively low, chickens rose less rapidly than most commodities. When prices fell and wages remained high, chickens were in demand and fell less rapidly than most commodities.

products, as they did following the Civil War. This tendency does not mean that eggs will be high in price at all times. It does, however, suggest that the poultry business will average on a more favorable basis than most farm products. Since this will attract

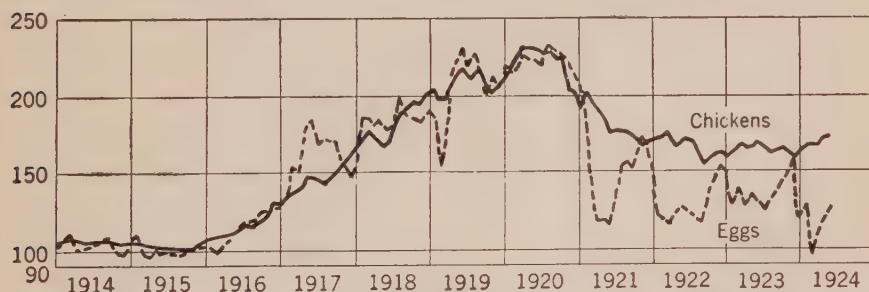


FIG. 85.—Prices paid to farmers for chickens and for eggs. The prices of eggs fell much more than did those of chickens. This was due in part to high demand for poultry and in part to cheap feed which made poultry profitable and tended to keep poultry on farms.

more producers, there will doubtless be times of over-production, but the average demand promises to be good.

Prices of eggs in different states.—As with all other commodities when prices are rapidly rising, handling charges rise less rapidly, so that the increase in price in the states that are distant from

market is greater than for states near market. For five years the index numbers of the price of eggs were higher in Kansas than in Ohio. When prices fell the relationships were reversed. Farmers in Ohio received higher prices compared with pre-war than did the farmers in Kansas.

Prices of poultry.—Prices paid to farmers for chickens followed much the same course as did prices of eggs, except that chicken meat being more of a luxury than eggs, rose less rapidly. After the war when food was cheap relative to wages chickens remained higher than eggs.

TABLE CI
PRICES PAID TO PRODUCERS FOR EGGS IN THE UNITED STATES
Cents per Dozen

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	29.6	26.3	21.5	17.1	16.7	16.7	16.7	17.2	19.3	22.3	25.5	30.0	21.6
1910	30.5	28.9	22.9	18.6	18.6	18.3	18.2	17.6	19.4	22.4	25.3	29.0	22.5
1911	30.4	22.1	16.5	14.9	14.7	14.5	14.2	15.5	17.4	20.0	23.5	28.7	19.4
1912	29.5	29.1	24.5	17.8	17.1	16.7	16.7	17.4	19.1	22.0	25.9	29.7	22.1
1913	26.8	22.8	19.4	16.4	16.1	16.9	17.0	17.2	19.5	23.4	27.4	33.0	21.3
1914	30.7	28.4	24.2	17.6	16.8	17.3	17.6	18.2	21.0	23.5	25.3	29.7	22.5
1915	31.6	29.2	21.3	16.6	17.1	16.6	16.8	17.0	18.7	22.3	26.3	30.6	22.0
1916	30.6	26.8	21.2	17.9	18.1	19.0	19.7	20.7	23.3	28.1	32.2	38.1	24.6
1917	37.7	35.8	33.8	25.9	30.0	31.1	28.3	29.8	33.2	37.4	39.4	43.3	33.8
1918	46.3	49.4	40.4	31.2	31.0	29.8	30.7	34.4	36.4	41.6	47.2	55.0	39.5
1919	57.2	48.3	33.1	34.3	36.8	38.6	36.8	39.3	41.0	44.7	54.0	61.9	43.8
1920	64.8	56.9	46.6	38.8	37.4	37.0	36.7	40.0	44.2	50.1	56.9	65.0	47.9
1921	61.1	49.6	29.2	20.4	20.2	19.4	22.0	26.6	30.4	34.2	44.2	51.1	34.0
1922	44.9	32.0	25.4	19.9	21.0	21.2	20.7	20.5	22.7	30.5	37.6	46.1	28.5
1923	44.2	33.5	30.4	21.8	22.5	21.8	20.9	22.9	26.5	32.4	38.3	47.8	30.3
1924	35.4	33.6	20.4	19.1	19.8	21.1	23.1	26.1	31.8				

TABLE CII

INDEX NUMBERS OF PRICES PAID TO PRODUCERS OF EGGS IN THE UNITED STATES
Corresponding Months, 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	103	110	107	109	111	110	109	102	101	100	99	97	104
1911	103	84	77	87	88	87	85	90	90	90	92	96	90
1912	100	111	114	104	102	100	100	101	99	99	102	99	102
1913	91	87	90	96	96	101	102	100	101	105	107	110	99
1914	104	108	113	103	101	104	105	106	109	105	99	99	104
1915	107	111	99	97	102	99	101	99	97	100	103	102	102
1916	103	102	99	105	108	114	118	120	121	126	126	127	114
1917	127	136	157	151	180	186	169	173	172	168	155	144	156
1918	156	188	188	182	186	178	184	200	189	187	185	183	183
1919	193	184	154	201	220	231	220	228	212	200	212	206	203
1920	219	216	217	227	224	222	220	233	229	225	223	217	222
1921	206	189	136	119	121	116	132	155	158	153	173	170	157
1922	152	122	118	116	126	127	124	119	118	137	147	154	132
1923	149	127	141	127	135	131	125	133	137	145	150	159	140
1924	120	128	95	112	119	126	138	152	165				

TABLE CIII

PRICES PAID TO PRODUCERS FOR CHICKENS IN THE UNITED STATES

Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	10.7	10.9	11.2	11.5	11.8	11.8	11.9	12.0	11.9	11.8	11.4	10.8	11.5
1910	10.9	11.1	11.6	11.9	12.4	12.4	12.3	12.2	11.9	11.6	11.3	10.6	11.7
1911	10.5	10.6	10.6	10.8	11.0	11.0	11.2	11.2	11.1	10.9	10.3	9.6	10.7
1912	9.8	10.3	10.5	10.8	11.1	11.1	11.0	11.3	11.3	11.5	11.2	10.8	10.9
1913	10.7	10.9	11.1	11.6	11.8	12.0	12.1	12.4	12.4	12.5	12.1	11.5	11.8
1914	11.5	11.7	12.1	12.3	12.5	12.5	12.7	12.8	12.7	12.5	11.9	11.3	12.2
1915	11.2	11.5	11.7	11.9	12.1	12.2	12.2	12.2	12.1	12.0	11.8	11.5	11.9
1916	11.4	11.9	12.2	12.6	13.2	13.5	13.8	13.8	13.9	14.3	14.3	14.2	13.3
1917	13.9	14.7	15.5	16.1	17.5	17.5	17.3	17.1	17.2	18.1	17.7	17.5	16.7
1918	17.9	18.8	19.9	19.8	19.8	20.0	21.2	22.6	22.8	23.1	22.4	21.8	20.8
1919	21.7	21.6	22.2	23.5	25.2	25.7	25.2	25.9	25.7	24.2	22.9	22.3	23.8
1920	29.6	24.1	25.4	26.8	27.4	27.2	27.0	27.4	26.7	26.4	23.4	22.1	25.5
1921	20.7	21.9	22.1	22.2	21.7	20.7	21.1	21.2	20.9	20.3	19.0	18.4	20.9
1922	18.5	18.8	19.6	19.4	19.9	20.3	20.4	19.3	18.5	18.7	18.5	17.5	19.1
1923	17.1	17.8	18.7	19.0	19.6	19.9	19.7	19.6	19.5	19.6	18.5	17.3	18.9
1924	17.5	18.2	18.9	19.4	20.3	20.5	20.2	20.0	19.8				

TABLE CIV

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR CHICKENS
IN THE UNITED STATES

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	102	102	104	103	105	105	103	102	100	98	99	98	102
1911	98	97	95	94	93	93	94	93	93	92	90	89	93
1912	92	94	94	94	94	94	92	94	95	97	98	100	95
1913	100	100	99	101	100	102	102	103	104	106	106	106	102
1914	107	107	108	107	106	106	107	107	107	106	104	105	106
1915	105	106	104	103	103	103	103	102	102	102	104	106	103
1916	107	109	109	110	112	114	116	115	117	121	125	131	116
1917	130	135	138	140	148	148	145	143	145	153	155	162	145
1918	167	172	178	172	168	169	178	188	192	196	196	202	181
1919	203	198	198	204	214	218	212	216	216	205	201	206	207
1920	211	221	227	233	232	231	227	228	224	224	204	205	222
1921	193	201	197	193	184	175	177	177	176	172	167	170	182
1922	173	172	175	169	169	172	171	161	155	158	162	162	166
1923	160	163	167	165	166	169	166	163	164	166	162	160	164
1924	164	167	169	169	172	174	170	167	166				

TABLE CV—WHOLESALE PRICES OF EGGS—CIVIL WAR AND WORLD WAR

Eggs in Boston*			Eggs, Fresh Firsts, New York City†		
Year	Price per Dozen	Index Number	Year	Price per Dozen	Index Number
Average, October, 1856 to July, 1861:	Cents		Average, 1910-1914:	Cents	
January.....	22.5	100	January.....	31	100
April.....	16.7	100	April.....	20	100
July.....	13.8	100	July.....	19	100
October.....	16.5	100	October.....	26	100
1861: October.....	13	79	1915: January.....	38	123
1862: January.....	23.5	104	April.....	21	105
April.....	13	78	July.....	20	105
July.....	12	87	October.....	30	115
October.....	14.5	88	1916: January.....	31	100
1863: January.....	20	89	April.....	22	110
April.....	23.5	141	July.....	25	132
July.....	19.5	141	October.....	34	131
October.....	20	121	1917: January.....	46	148
1864: January.....	29	129	April.....	34	170
April.....	21	126	July.....	34	179
July.....	25.5	185	October.....	41	158
October.....	29	176	1918: January.....	65	210
1865: January.....	44	196	April.....	35	175
April.....	18.5	111	July.....	41	216
July.....	26.5	192	October.....	53	204
October.....	28.5	173	1919: January.....	62	200
1866: January.....	39	173	April.....	43	215
April.....	23.5	141	July.....	46	242
July.....	23.5	170	October.....	62	238
October.....	27.5	167	1920: January.....	71	229
1867: January.....	37.5	167	April.....	44	220
April.....	24	144	July.....	47	247
July.....	19	138	October.....	64	246
October.....	29	176	1921: January.....	67	216
1868: January.....	45	200	April.....	27	135
April.....	27.5	165	July.....	33	174
July.....	25.5	185	October.....	49	188
October.....	30.5	185	1922: January.....	41	132
1869: January.....	41.5	184	April.....	26	130
April.....	29	174	July.....	24	126
July.....	23.5	170	October.....	43	165
October.....	31	188	1923: January.....	42	135
1870: January.....	47	209	April.....	27	135
April.....	28	168	July.....	25	132
July.....	22	159	October.....	39	150
October.....	28	170			
1871: January.....	33.5	149			
April.....	19	114			
July.....	19	138			
October.....	28.5	173			
1872: January.....	37.5	167			
April.....	23	138			
July.....	18	130			
October.....	26.5	161			
1873: January.....	40.5	180			
April.....	22.5	135			
July.....	21.5	156			
October.....	27.5	167			
1874: January.....	40.5	180			
April.....	24.5	147			
July.....	22	159			
October.....	25	152			
1875: January.....	33.5	149			
April.....	24.5	147			
July.....	18	130			
October.....	27	164			
1876: January.....	33	147			
April.....	18.5	111			
July.....	17	123			
October.....	23	139			
1877: January.....	29.5	131			
April.....	17.5	105			
July.....	17	123			
October.....	20.5	124			
1878: January.....	24	107			
April.....	11.5	69			
July.....	12.5	91			
October.....	19.5	118			
1879: January.....	25.5	113			
April.....	14.5	87			
July.....	12.5	91			
October.....	19.5	118			
1880: January.....	22	98			
April.....	12.5	75			
July.....	12.75	92			
October.....	20.5	124			

* Wholesale prices, wages, and transportation.
Report by Mr. Aldrich from the Committee on Finance, March 3, 1893. Senate Report No. 1394, Fifty-second Congress, second session, Part II.

† As reported by the United States Department of Agriculture.

CHAPTER XIX

HORSES

Index numbers of prices of horses.—The price of horses from 1910 to 1914 was somewhat higher than normal. Since the base period, 1910–14, was a period of high prices, the index numbers for the later years are somewhat too low. Horses fell in price throughout practically all of the war period, and continued to fall after the war was over. In 1924, the average prices in the United States was slightly more than one-half of the five-year pre-war average.

Prices of horses in different states.—Owing to freight rates, handling charges, and risk in shipment, the price of horses in deficit

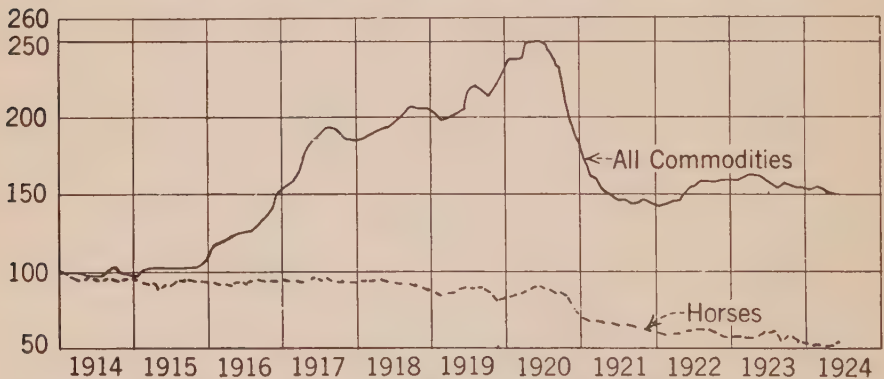


FIG. 86.—Prices paid to farmers for horses, and wholesale prices of all commodities.

areas ordinarily must be equal to the price in the producing centers, plus handling charges. Now that freight rates and all handling charges are much higher than before the war, the difference in prices between the east and west are much increased.

Prices in Montana, January 1, 1924, averaged \$31 per head. This was less than a third of the price of 1918 and was nearly as low as prices in 1897. In Massachusetts prices in 1924 were more than double the price in 1897. If horses were given away in Mon-

tana they would be higher in Massachusetts than they were in 1897 because the handling charges are now greater than the Montana price plus handling charges at the former date.

In 1885, the difference in the value per head in Massachusetts and Montana was \$48. When horses were cheap in 1897, the difference was \$41. The difference gradually increased as wages rose and for the five years, 1910 to 1914, horses in Massachusetts were worth \$55 per head more than in Montana. With the increases in freight charges and other costs of distribution, the difference in price between Massachusetts and Montana for the four years 1921 to 1924 averaged \$100. Since horses in Massachusetts fell in price,

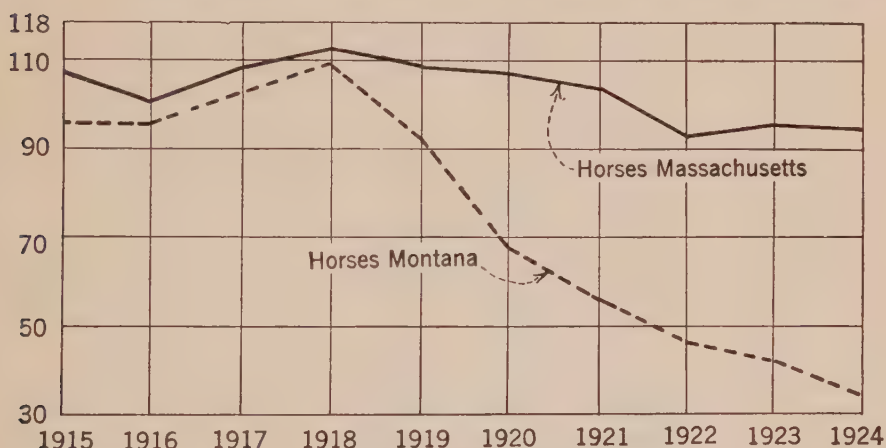


FIG. 87.—Decline in prices of horses in Massachusetts and in Montana. Prices of horses in Massachusetts are equal to Montana prices plus shipping and handling charges. Hence, they did not decline as did prices in Montana.

it is evident that the decline must have been much more per head in Montana, in fact, they would have declined \$45 in Montana if they had remained stationary in Massachusetts.

These striking discrepancies are another illustration of the mal-adjustments brought about by deflation. The common assumption that a rise or fall in the price level merely raises or lowers all things is so untrue that it is surprising that any intelligent person would hold this view. A change in the price level makes all manner of changes between different commodities, and for the same commodity in different regions. It has the most far-reaching effect on types of farming.

In 1919 horses in Massachusetts were 12 per cent above pre-war

prices and in Montana were 9 per cent above, showing that the two were in their usual relationship. On January 1, 1924, horses in Massachusetts were selling for 94 per cent of the pre-war price, but in Montana were selling for 34 per cent of pre-war.

When prices are compared with the wholesale prices of all commodities, horses in Massachusetts in 1924 had a purchasing power of 61, but in Montana they had a purchasing power of 22. Horses were practically unsalable in Montana.

Montana is a great horse-producing state. It produces good horses and produces them cheaply, but the industry was so completely prostrated that in the year 1923 no horses were exhibited at the State Fair. Such a situation is disastrous to horse raisers. It is very unfortunate from the public standpoint. It is very desirable that the good young brood mares be kept, but the persons who are interested in horses lost so much money that they are unable to continue to finance the business. When the Massachusetts farmer buys a horse he is not paying the western farmer that produced the horse, but is paying city labor that moved the horse.

Periods of over- and under-production of horses.—Violent changes in the price level result in violent changes in industry. If the price of a particular product is not favorable, its production is checked, but the price does not fully respond to the reduced effort until the product that is already in the process of production and merchandising is nearly exhausted. Prices then rise and new production begins, but the new efforts at production have only a limited effect on prices until the new goods have passed through the process of production and merchandising. The length of time that the prices of a particular product remain high or low, therefore, depends largely on how long it takes from the beginning to the completion of the product. Other factors are, of course, involved.

If the production of horses is not profitable, the raising of colts is checked, but usually the prices drop moderately for a year or more before they clearly indicate over-production. It is a year after the decision is made before there is decrease in the number of colts, and four years before there is a decrease in three-year-old colts. For several years the decrease in number of colts raised increases the apparent surplus of horses, for a mare can do more work when she does not raise a colt. By the time the supply of mature horses is so short as to be reflected in prices, there is a shortage in several crops of colts. If colt raising is again begun, it still further increases

the apparent shortage of horses, because large numbers of mares are bred and they cannot then do a full year's work. In 1878 the purchasing power of horses began to rise, and the increase continued for ten years. It then fell for ten years, rose for fourteen years and fell for thirteen years. Apparently the tide will soon turn.

The primary reason for the decline in the price of horses was over-production. The decline would undoubtedly have occurred in any event, but trucks, automobiles, and tractors increased the depression, so that the purchasing power of a horse has reached the lowest level ever reported. Some persons believe that horses

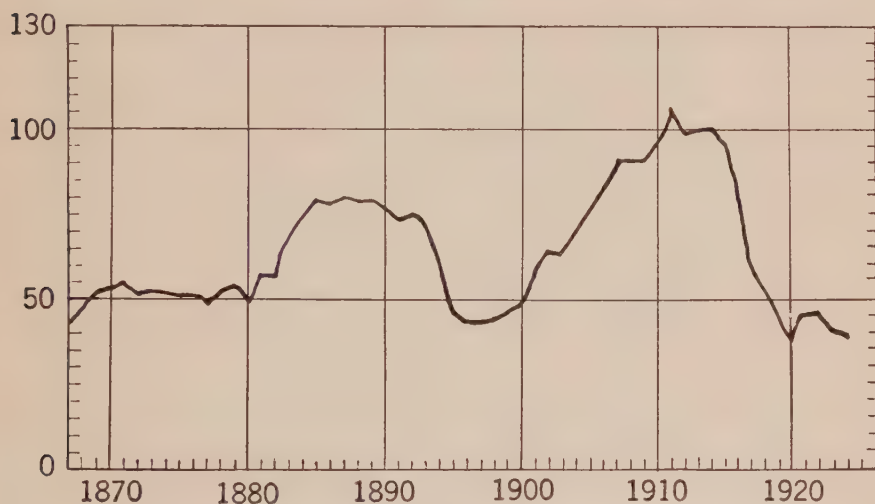


FIG. 88.—Purchasing power of horses. Compared with other things, horses are high in price for about 10 to 12 years and are low for an equal time.

will never again be high because of tractors, trucks, and automobiles. As a matter of fact the more violent the depression the more certain the recovery. On January 1, 1918, there were in the United States 21,555,000 horses on farms. This number declined to 18,263,000 on January 1, 1924. Even if only 10 million horses were needed and prices fall so low as to check production so that only 8 million are produced, horses will be very high. Of course, more than 10 million are needed. Judging by the past, the expectation is that horses will gradually rise in purchasing power; that is, if other prices remain stationary, horses will increase in price, or if other prices fall, the price of horses will fall less rapidly, or may rise. Before many years a decided shortage of horses is to be expected.

Ratio of prices of horses to prices of horse feed.—Horses are not natural resources any more than are watches. Horses are made from grass, hay, corn, oats, and the like. When their prices are far out of adjustment with prices of these raw materials out of which a horse is made, violent changes in production occur. If the ratio of the price of horses to the price of oats and hay for the fifty-five years ending with 1924 is called 100, then the ratio of the price of horses to the price of feed in 1920 was 70. In 1911 it was 150. It is practically certain that the ratio will rise, and it is probable that it will reach a ratio of 140 in ten years. That is, it is probable that horses will be so high that a horse will exchange for 40 per cent more than the normal amount of horse feed. The ratios of a single year are affected by good and poor crops as well as by the value of horses so that they are not so smooth as the purchasing power figures. However, they swing from about 70 to 140.

Stallion enrollment.—The tendency to produce too few horses because at present prices it is unprofitable to grow them, is well illustrated by the enrollment of stallions in five states. The number enrolled in 1913 was 29,213. The number declined but little until 1917. The enrollment then fell very rapidly and in 1924 was only 7062.

The decline in the number of grades registered was greater than in the case of pure breds. In 1924 there were only one-third as many pure-bred stallions as in 1913 and only one-tenth as many grades. In 1913 the grade stallions represented 41 per cent of the enrollment, and in 1924 but 17 per cent. Some persons have concluded that the stallion enrollment indicates improvement in the horse industry as the percentage of pure breds is increasing. This, however, is not an accurate barometer of improvement, as the number of stallions has been so reduced that the nation is short of pure breds as well as grades.

TABLE CVI

PRICES PAID TO PRODUCERS FOR HORSES IN THE UNITED STATES

Dollars per Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	139	143	144	146	144	145	142	141	140	138	137	136	141
1910	140	147	150	154	148	151	148	148	145	144	143	141	147
1911	143	144	145	147	146	145	139	141	139	137	136	134	141
1912	134	137	140	142	144	145	142	142	141	140	139	139	140
1913	140	146	146	148	145	146	143	141	141	138	136	135	142
1914	137	139	138	138	139	136	137	135	132	131	130	130	135
1915	130	132	132	132	133	132	134	131	131	129	127	126	131
1916	128	129	131	133	134	132	133	131	131	130	129	129	131
1917	129	131	133	136	138	137	135	132	132	130	129	129	133
1918	130	133	137	137	136	135	132	131	128	126	122	121	131
1919	120	121	124	127	129	127	127	125	119	114	113	113	122
1920	118	123	127	131	132	130	127	124	119	112	103	97	120
1921	96	98	101	100	98	98	94	93	89	85	82	81	93
1922	82	84	86	87	89	88	88	86	84	81	79	79	84
1923	81	85	85	86	88	87	85	78	82	80	78	75	83
1924	73	74	75	76	78	77	77	79	78				

TABLE CVII

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR HORSES
IN THE UNITED STATES

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	101	103	104	105	103	104	104	105	104	104	104	104	104
1911	103	101	101	101	101	100	98	100	99	99	99	99	100
1912	96	96	97	97	100	100	100	101	101	101	101	102	99
1913	101	102	101	101	101	101	101	100	101	100	99	99	101
1914	99	97	96	95	97	94	96	96	94	95	95	96	96
1915	94	92	92	90	92	91	94	93	94	93	93	93	93
1916	92	90	91	91	93	91	94	93	94	94	94	95	93
1917	93	92	92	93	96	94	95	94	94	94	94	95	94
1918	94	93	95	94	94	93	93	93	91	91	89	89	93
1919	86	85	86	87	90	88	89	89	85	83	82	83	87
1920	85	86	88	90	92	90	89	88	85	81	75	71	85
1921	69	69	70	68	68	68	66	66	64	62	60	60	66
1922	59	59	60	60	62	61	62	61	60	59	58	58	60
1923	58	59	59	59	61	60	60	55	59	58	57	55	59
1924	53	52	52	52	54	53	56						

TABLE CVIII

INDEX NUMBERS AND PURCHASING POWER OF THE PRICES OF HORSES, JANUARY 1,
IN MASSACHUSETTS, OHIO, KANSAS, AND MONTANA

Year	Prices				Index Number of Prices				Purchasing Power			
	Massa- chusetts	Ohio	Kan- sas	Mon- tana	Massa- chusetts	Ohio	Kan- sas	Mon- tana	Massa- chusetts	Ohio	Kan- sas	Mon- tana
1910-14	\$145.00	\$130.00	\$101.00	\$90.00	100	100	100	100				
1875	103.03	66.49	39.58	....	71	51	39	....	65	46	35	
1885	104.08	80.04	74.48	55.81	72	62	74	62	87	75	89	75
1897	64.67	36.67	23.54	24.38	45	28	23	27	64	40	34	39
1910	128.00	129.00	107.00	80.00	88	99	106	89	85	95	102	86
1915	155.00	128.00	93.00	86.00	107	98	92	96	107	98	92	96
1916	146.00	116.00	97.00	86.00	101	89	96	96	88	77	83	83
1917	156.00	119.00	99.00	92.00	108	92	98	102	69	59	63	65
1918	163.00	112.00	104.00	98.00	112	86	103	109	60	46	55	58
1919	157.00	107.00	94.00	84.00	108	82	93	93	53	40	46	46
1920	155.00	109.00	79.00	60.00	107	84	78	67	45	35	33	28
1921	151.00	108.00	66.00	50.00	104	83	65	56	60	48	38	32
1922	135.00	99.00	48.00	41.00	93	76	48	46	66	54	34	33
1923	138.00	93.00	45.00	38.00	95	72	45	42	60	45	28	26
1924	136.00	80.00	41.00	31.00	94	62	41	34	61	40	27	22

TABLE CIX

FARM VALUE AND PURCHASING POWER OF HORSES IN THE UNITED STATES *

Year	Value per Head in Currency Jan. 1	Index Number of Value per Head (1910-1914=100)	Purchasing Power (1910-1914=100)	Year	Value per Head in Currency Jan. 1	Index Number of Value per Head (1910-1914=100)	Purchasing Power (1910-1914=100)
1867	\$79.72	73	43	1896	\$33.07	30	43
1868	75.44	69	47	1897	31.51	29	43
1869	85.10	78	52	1898	34.26	31	44
1870	81.58	75	53	1899	37.40	34	46
1871	78.97	72	54	1900	43.68	40	48
1872	73.48	67	51	1901	52.86	48	59
1873	75.02	69	52	1902	58.61	54	64
1874	72.32	66	52	1903	62.25	57	63
1875	69.04	63	51	1904	67.93	62	70
1876	64.74	59	51	1905	70.37	65	75
1877	59.18	54	49	1906	80.72	74	82
1878	57.76	53	52	1907	93.51	86	91
1879	52.36	48	53	1908	93.41	86	91
1880	54.16	50	49	1909	95.64	88	91
1881	58.44	54	57	1910	108.03	99	95
1882	58.53	54	56	1911	111.46	102	107
1883	70.59	65	68	1912	105.94	97	98
1884	74.64	68	74	1913	110.77	102	100
1885	73.70	68	79	1914	109.32	100	100
1886	71.27	65	78	1915	103.33	95	95
1887	72.15	66	80	1916	101.60	93	81
1888	71.82	66	79	1917	102.89	94	60
1889	71.89	66	79	1918	104.24	96	51
1890	70.22	64	76	1919	98.45	90	44
1891	67.00	61	73	1920	96.51	88	37
1892	65.01	60	75	1921	84.31	77	45
1893	61.22	56	72	1922	70.54	65	46
1894	47.83	44	59	1923	69.75	64	40
1895	36.29	33	46	1924	64.41	59	38

* Prices as reported by the Department of Agriculture are converted to currency during the Civil War period by using the premiums on gold as given by the Treasury Department. The index number of wholesale prices is on a currency basis; therefore the prices of hogs and horses are reduced to a currency basis.

Purchasing power is calculated by dividing the price index by the index number of wholesale price for January 1. For years before 1900 a January number is not available. The yearly average for the year and preceding year is then used.

TABLE CX

RATIOS OF PRICES OF HORSES TO PRICES OF HORSE FEED *

Ratio for 1869-1923 = 100

Year	Ratio	Year	Ratio	Year	Ratio	Year	Ratio
1869	82	1883	101	1897	73	1911	150
1870	93	1884	124	1898	76	1912	115
1871	88	1885	134	1899	79	1913	157
1872	81	1886	124	1900	85	1914	137
1873	92	1887	125	1901	93	1915	127
1874	86	1888	112	1902	80	1916	142
1875	70	1889	127	1903	101	1917	113
1876	84	1890	148	1904	104	1918	84
1877	90	1891	97	1905	115	1919	71
1878	100	1892	108	1906	141	1920	70
1879	107	1893	99	1907	141	1921	81
1880	84	1894	79	1908	111	1922	100
1881	79	1895	59	1909	121	1923	86
1882	68	1896	66	1910	142	1924	73

* Farm prices of horses on January 1, compared with prices of 100 bushels of oats and 3 tons of hay on the preceding December 1.

TABLE CXI

STALLION ENROLLMENT IN FIVE STATES

Year	Stallions			Index Numbers 1913 = 100		Per cent Grade
	Pure Bred	Grade	Total	Pure Bred	Grade	
1913	17,313	11,900	29,213	100	100	41
1914	17,635	11,349	28,984	102	95	39
1915	17,895	10,749	28,644	103	90	38
1916	17,333	9,715	27,048	100	82	36
1917	15,988	8,300	24,288	92	70	34
1918	13,420	6,078	19,498	78	51	31
1919	10,900	4,327	15,227	63	36	28
1920	9,280	3,032	12,312	54	25	25
1921	8,272	2,275	10,547	48	19	22
1922	7,767	1,516	9,283	45	13	16
1923	8,122	1,481	9,603	47	12	15
1924	5,875	1,187	7,062	34	10	17

CHAPTER XX

OTHER FARM PRODUCTS

Oats.—Before the war, the United States farm price of oats was 39.9. It was not until the fall of 1916 that oats rose much in price. In December, 1916, they were worth 52.4 cents. They rose rapidly until July, 1920, when they were worth 104.5 cents. Throughout the war period corn was considerably higher in price than oats. For the nine years, 1915 to 1924, oats averaged 37 per cent and corn, 61 per cent above pre-war.

Barley.—Barley fell in price even more than did oats. Much of the barley is fed to livestock, but the choicer grades were formerly used for making beer. Prohibition, therefore, affected prices. The acreage of barley in Wisconsin was reduced from 711,000 in 1918 to 443,000 in 1922. For the United States, the average area for the four years 1915 to 1918 was 8,400,000 acres, and in 1922 it was 7,400,000 acres.

Rye.—Before the war, the United States produced about 40 million bushels of rye, which is less than 3 per cent of the world crop. During the early part of the war, the price of rye followed the price of wheat fairly closely. When the price of wheat was held down to the price fixed by the government, rye was in demand and rose to three times the pre-war prices in the spring of 1918. Government regulations caused the prices to fall.

The high prices of the war period caused an expansion of the rye acreage. The acreage in 1922 was more than double pre-war. Rye will grow on land that is not adapted to wheat. It is probable that this accounts for the striking increase in acreage. The increased acreage probably accounts for the fact that rye was lower in price than wheat after prices fell.

Buckwheat.—New York and Pennsylvania produce more than half of the crop. The crop is grown on lands not well adapted to most other crops. Much of the area adapted to buckwheat is idle a part of the time. With the high prices the acreage was

increased about 20 per cent. When prices fell it paid better to work for wages rather than raise buckwheat, and the acreage fell below the pre-war level.

Flax.—Flax is a crop primarily produced in new regions. As the West was developed, there was a striking tendency to reduce the acreage of flax. In 1902 the area was 3,700,000 acres. It fell to 1,100,000 acres in 1921. The small amount of building in that year and the diminished demand for oil cake for export reduced prices below the pre-war level. With a protective tariff and increased building, prices for 1923 were 40 per cent above

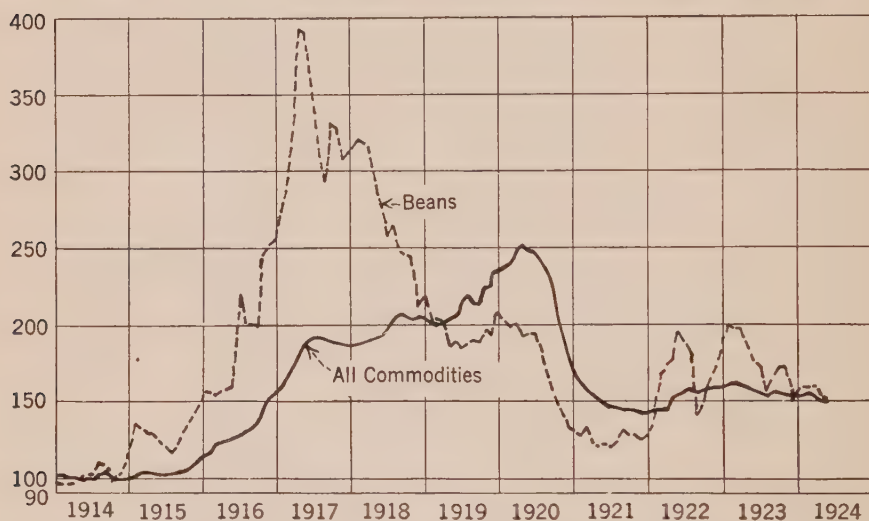


FIG. 89.—Prices paid to farmers for beans, and wholesale prices of all commodities. When prices rose faster than wages, so that there was a real high cost of living, beans were in great demand and rose very high in price. Over-production followed.

pre-war. Prices for wheat were only 12 per cent above pre-war. The flax acreage in 1924 was increased 64 per cent.

Beans.—When prices began to rise, the demand for beans was large and prices of beans for the years, 1916, 1917, and 1918, were very high. This was undoubtedly due to the fact that when wages suddenly rise the food habits shift in the same direction that they would if the food supply were less abundant. As a result of very high prices, the bean acreage was more than doubled. Prices fell and the acreage was for a time reduced below the pre-war level. The reduced acreage brought some recovery in prices.

Hay.—At no time during the war period did hay rise as high as most other products. For the four years, 1921 to 1924, hay prices were practically at the pre-war level. The use of the automobiles, trucks and tractors has undoubtedly contributed to the low prices of hay. It seems highly probable that hay will remain cheap until the acreage is reduced or until the demand for it as feed for cattle increases enough to make up for the decreased demand for horse feed. Another factor tending to hold the price of hay down following the war is the fact that wages have been so high that some farmers have reduced their labor requirements by leaving more land in hay.

Cottonseed.—Before the war farmers received about \$21 per

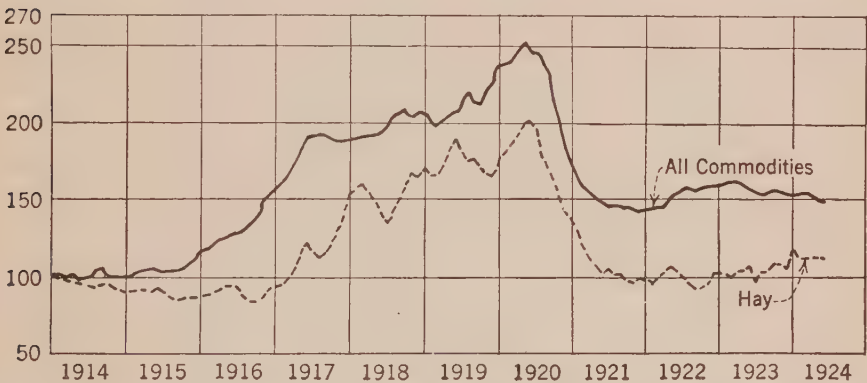


FIG. 90.—Prices paid to farmers for hay, and wholesale prices of all commodities. Throughout the entire war period, hay averaged lower than most commodities. For the four years 1921 to 1924, it was about at pre-war prices.

ton for cottonseed. The price rose rapidly and in 1918 and 1919 it brought over three times the pre-war price. It fell to pre-war prices in 1921, but was double the pre-war in 1923 and 1924. Cottonseed has two important uses. The oil is used for soap and for food. The cake that is left after extracting the oil is an important feed for dairy cattle. The price of cottonseed is dependent on the size of the cotton crop and on the demand for cottonseed oil and cottonseed meal.

Tobacco.—Before the war, the average price paid to farmers was a little over 10 cents per pound. During the war period, there was a great increase in the use of tobacco. This resulted in very high prices. In 1919, tobacco was nearly four times its pre-war price. The acreage was rapidly expanded. For the

five years, 1919 to 1923, the acreage was 46 per cent above the five year pre-war average, yet prices for these five years averaged 138 per cent above pre-war prices. For short periods of time prices fell, but in general the producers of tobacco were highly prosperous and the agricultural depression has been unimportant in sections where tobacco is the major crop.

Tobacco is like other minor crops in that there are large areas adapted to its growth that are not now producing it. As in the case of other minor crops the high prices will in time cause such an expansion in the acreage that there is danger of over-production.

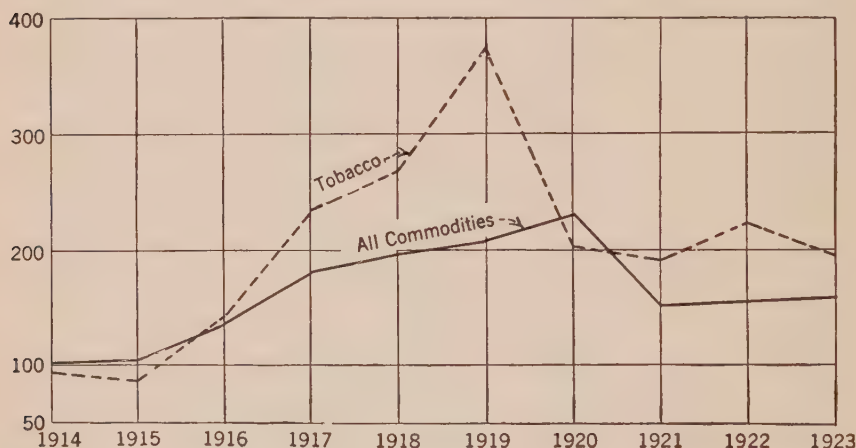


FIG. 91.—Prices paid to farmers for tobacco, and wholesale prices of all commodities. The use of tobacco was greatly increased during the war period, and prices have been very high most of the time. Since large areas are adapted to this crop, the high prices may bring over-production.

The tendency to value tobacco lands and buildings on the basis of present prices is dangerous.

Apples.—The apple crop is exceedingly variable, depending on the weather and on the tendency for the trees to bear heavily in alternate years. With few exceptions the crops on the even years are much larger than on the odd years. This has held true for the past twenty-five years with very few exceptions. The rainfall also influences the size of the crop.

Two other factors have tended to depress the price of apples. One is the tendency to substitute tropical and semi-tropical fruits. There is also a tendency for apple prices to be high for about a generation. Planting then tends to be too great. When the trees

that are planted in that period come into bearing there is a tendency for low prices and under-planting for about a generation. Planting is usually done because apples have been profitable. The acreage that should be planted is not dependent on past prices, but is dependent on the demand a generation hence. For nine of the ten years ending with the crop of 1923, winter apples were cheap compared with all commodities.

Cabbage.—The demand for cabbage is not very elastic. Like potatoes, cabbage is always cheap enough so that any one can satisfy his appetite. An unusually large crop, therefore, results in very low prices and an unusually small crop results in high

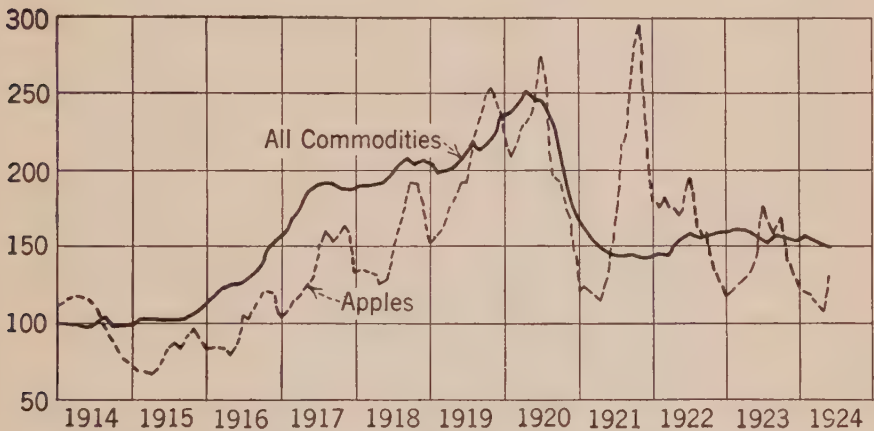


FIG. 92.—Prices paid to farmers for apples, and wholesale prices of all commodities. Winter apples have been lower than the general price level in 9 of the 11 years shown.

prices. The rainfall is, therefore, the primary factor in determining prices.¹ But prices to the farmer cannot fall much below the cost of harvesting the crop. The price is also affected by inflation and deflation so that prices tend to fluctuate about the general price level.

Onions.—Like other minor crops the acreage can be expanded indefinitely. After high prices for a year or two the acreage is too great. Weather is an important factor. Prices in 1917 were very high. They were low in 1918, high in 1919 and 1920, low in 1921, and high in 1922 and 1923. The prosperity of the onion growers

¹ Misner, E. G., *Production and Prices of Cabbage*, Farm Economics, No. 16, p. 149, July, 1924.

is more dependent on these erratic price relationships than on the general agricultural depression. The area of commercial onions in 1920 was 66,000 acres. The price the following winter was very low and the acreage was cut to 58,000 in 1921 and the yield per acre was low. Prices that winter were very high, and the area was expanded to 65,000 acres, but the yield per acre was less than in 1920 and prices did not go so low as in that year.

The imports are usually high in years of high prices and low in

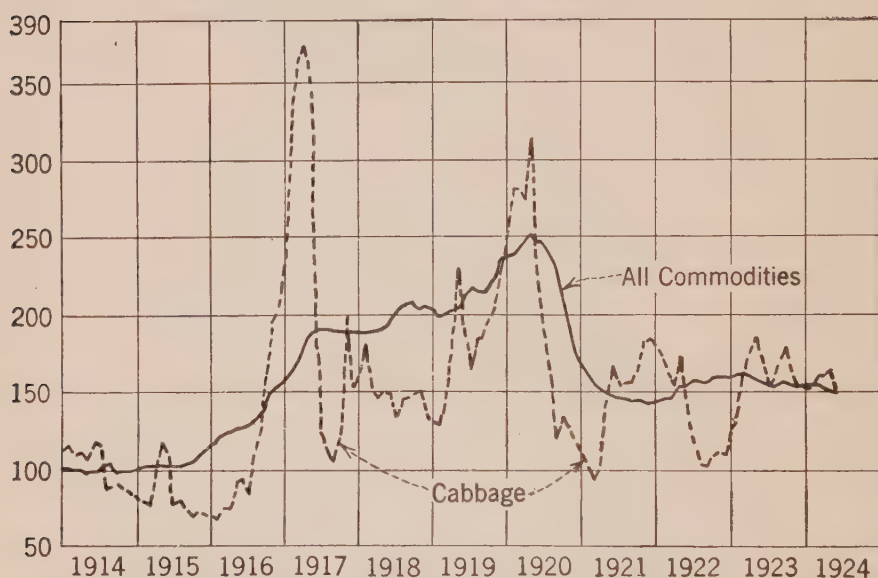


FIG. 93.—Prices paid to farmers for cabbage, and wholesale prices of all commodities. Prices of cabbage are very erratic, because the demand is very steady and the crop varies greatly, depending on rainfall.

years of low prices. They therefore tend to steady prices to some extent.

Peanuts.—Throughout the war period, peanuts were lower in price than most commodities when compared with pre-war prices. In 1921, they were far below pre-war prices and the acreage in 1922 was reduced.

Broom corn.—A large part of the corn belt is adapted to broom corn. Farmers can shift from one to the other readily. But as is the case with all minor crops, a shift from the minor to the major crop has little effect on the major one, but a shift from the major to the minor crop may result in great over-production.

Judging by the acreage in 1909, the area of broom corn in 1916 and 1917 was too low. In the fall of 1916, prices rose and remained high for three years. The acreage from 1917 to 1919 averaged 52 per cent greater than it was in 1916. The low prices in 1919 to 1921 reduced the acreage and prices were again high in 1922 and 1923. Apparently when the stocks of broom corn are too high it takes more than one year to get rid of them. The price

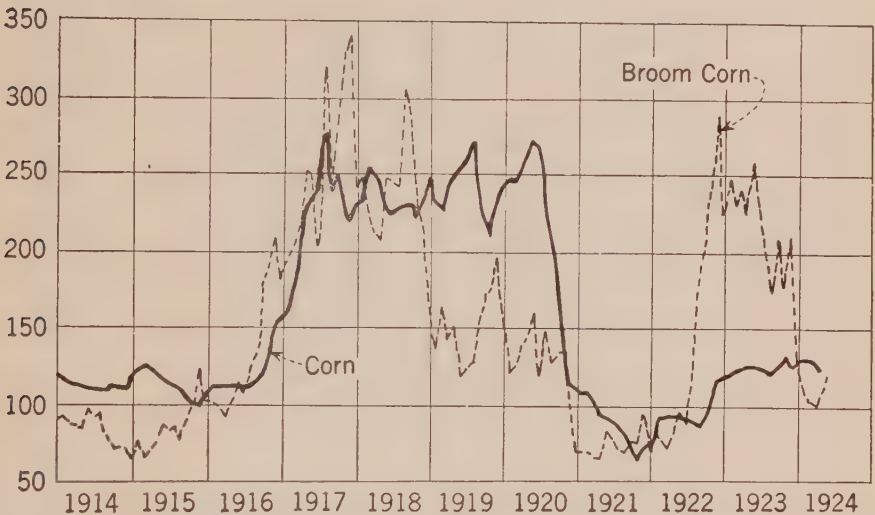


FIG. 94.—Prices paid to farmers for corn and broom corn. Most of the good corn land will raise broom corn. For three years, prices of broom corn were so much higher than corn that great over-production occurred, followed by three years of prices far below those of corn. This, again, was followed by two high-priced years. Prices for the 1923 broom-corn crop were lower than those of corn. If the low prices are repeated for the crop of 1924, a great shortage will probably occur in 1925 or 1926.

of broom corn is exceedingly erratic, but probably fluctuates around the price of corn.

Clover and timothy seed.—The five-year pre-war price of clover seed was \$9 per bushel. It did not rise as fast as other farm products until 1918. From 1918 to 1920, the price was very high. Compared with pre-war prices timothy seed was at no time very high. Sufficient data are not available to indicate whether the pre-war years were profitable ones. It may be that the index numbers in the later years were due to the high prices in the base period.

TABLE CXII

PRICES PAID TO PRODUCERS FOR OATS IN THE UNITED STATES

Cents per Bushel

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	38.5	39.5	40.1	40.5	41.2	41.8	41.7	40.1	39.1	39.0	38.6	38.9	39.9
1910	42.8	45.0	46.0	45.6	43.3	43.0	42.1	41.7	38.4	36.2	34.9	34.4	41.1
1911	33.2	33.1	32.8	32.3	33.2	34.7	37.5	40.2	40.4	42.5	43.8	45.0	37.4
1912	45.1	47.5	49.8	52.0	56.0	55.3	52.5	44.3	35.0	33.6	33.6	31.9	44.7
1913	32.2	32.4	33.1	33.1	34.2	36.0	37.7	37.6	39.3	39.6	37.9	39.2	36.0
1914	39.1	39.3	38.9	39.5	39.5	40.0	38.8	36.7	42.3	43.3	42.9	43.8	40.3
1915	45.0	50.1	52.1	53.4	53.4	51.3	46.7	45.4	38.5	34.5	34.9	36.1	45.1
1916	39.1	44.6	42.7	42.0	42.6	42.1	40.4	40.1	43.1	44.5	49.0	52.4	43.6
1917	51.4	55.2	56.9	61.5	71.0	69.9	68.9	73.7	61.7	62.3	61.7	66.6	63.4
1918	73.9	78.7	86.2	88.9	86.0	78.1	76.3	73.0	70.3	71.0	68.2	70.9	76.8
1919	70.8	64.3	62.6	65.8	70.9	71.2	70.9	75.3	71.7	68.4	68.7	70.4	69.4
1920	78.2	82.7	84.5	90.7	98.3	102.9	104.5	81.9	70.2	60.7	54.5	46.0	79.7
1921	45.6	41.8	41.9	39.3	36.8	37.9	35.6	33.8	30.1	31.0	29.2	30.3	36.1
1922	31.0	32.8	36.6	36.5	37.9	38.4	37.3	35.0	32.2	34.5	38.2	39.4	35.8
1923	41.2	41.8	43.1	43.9	45.7	44.9	42.5	37.8	37.3	38.6	40.2	41.5	41.5
1924	43.4	45.4	46.2	46.5	46.3	46.8	49.4	49.1	47.1				

TABLE CXIII

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR OATS IN THE UNITED STATES

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	111	114	115	113	105	103	101	104	98	93	90	88	103
1911	86	84	82	80	81	83	90	100	103	109	113	116	94
1912	117	120	124	128	136	132	126	110	90	86	87	82	112
1913	84	82	83	82	83	86	90	94	101	102	98	101	90
1914	102	99	97	98	96	96	93	92	108	111	111	113	101
1915	117	127	130	132	130	123	112	113	98	88	90	93	113
1916	102	113	106	103	103	101	97	100	110	114	127	135	109
1917	134	140	142	152	172	167	165	184	158	160	160	171	159
1918	192	199	215	220	209	187	183	182	180	182	177	182	192
1919	184	163	156	162	172	170	170	188	183	175	178	184	174
1920	203	209	211	224	239	246	251	204	180	156	141	121	200
1921	118	106	104	97	89	91	85	84	77	79	76	78	90
1922	81	83	91	90	92	92	89	87	82	88	99	101	90
1923	107	106	107	108	111	107	102	94	95	99	104	107	104
1924	113	115	115	115	112	112	118	122	120				

TABLE CXIV

PRICES PAID TO PRODUCERS FOR BARLEY IN THE UNITED STATES

Cents per Bushel

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	61.2	63.7	62.9	64.3	64.9	64.5	61.4	57.3	59.1	60.2	60.1	60.6	61.7
1910	57.6	59.3	60.2	59.7	56.5	55.7	53.9	54.7	57.2	56.1	55.3	57.8	57.0
1911	59.8	64.1	63.0	69.1	74.0	73.8	70.1	69.3	77.0	81.7	84.9	86.9	72.8
1912	86.4	91.2	91.0	92.3	96.2	91.1	81.9	66.8	53.5	54.8	53.8	50.5	75.8
1913	49.9	51.4	49.0	48.5	48.3	52.7	53.7	50.8	55.2	56.8	54.7	53.7	52.1
1914	52.2	52.4	51.1	51.7	49.3	49.1	47.5	45.1	52.5	51.8	51.7	54.3	50.7
1915	54.3	62.9	67.7	64.7	63.8	62.0	55.8	56.7	51.9	46.8	50.1	51.6	57.4
1916	54.9	61.7	59.6	57.2	59.6	59.6	59.3	59.3	72.9	76.5	83.2	88.1	66.0
1917	87.1	92.7	96.9	102.3	120.1	119.3	106.6	114.5	110.0	113.9	111.3	113.7	107.4
1918	126.5	131.9	161.1	170.2	158.5	135.4	118.4	110.0	100.9	95.5	94.9	91.7	124.6
1919	91.3	86.8	85.4	92.7	103.9	109.2	108.4	118.7	115.6	115.3	117.1	120.6	105.4
1920	130.2	137.1	129.3	140.0	146.4	148.3	142.0	121.0	105.0	91.2	81.7	71.3	120.2
1921	64.4	57.2	56.8	54.4	49.2	51.6	50.6	49.4	47.0	45.4	41.7	42.2	50.8
1922	43.7	44.3	49.6	52.8	56.3	57.7	52.2	49.7	45.7	46.7	51.6	52.5	50.2
1923	58.6	55.0	57.4	58.6	60.7	60.9	55.7	53.7	50.7	53.1	56.3	54.0	56.2
1924	56.5	58.0	60.0	61.0	60.0	61.9	68.8	75.7	75.6				

TABLE CXV

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR BARLEY IN THE UNITED STATES

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	94	93	96	93	87	86	88	95	97	93	92	95	92
1911	98	101	100	107	114	114	114	121	130	136	141	143	118
1912	141	143	145	144	148	141	133	117	91	91	90	83	123
1913	82	81	78	75	74	82	87	89	93	94	91	89	84
1914	85	82	81	80	76	76	77	79	89	86	86	90	82
1915	89	99	108	101	98	96	91	99	88	78	83	85	93
1916	90	97	95	89	92	92	97	103	123	127	138	145	107
1917	142	146	154	159	185	185	174	200	186	189	185	188	174
1918	207	207	256	265	244	210	193	192	171	159	158	151	202
1919	149	136	136	144	160	169	177	207	196	192	195	200	171
1920	213	215	206	218	226	230	231	211	178	151	136	117	195
1921	105	90	90	85	76	80	82	86	80	75	69	70	82
1922	71	70	79	82	87	89	85	87	77	78	86	87	81
1923	96	86	91	91	94	94	91	94	86	88	94	89	91
1924	92	91	95	95	92	96	112	132	128				

TABLE CXVI

PRICES PAID TO PRODUCERS FOR RYE IN THE UNITED STATES

Cents per Bushel

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	71.4	72.8	71.5	72.6	72.1	73.5	72.3	69.9	72.0	73.3	73.4	74.2	72.4
1910	74.8	76.1	76.5	76.6	74.9	74.8	74.6	74.4	74.1	72.8	71.6	71.5	74.4
1911	73.3	73.1	71.9	75.4	75.8	77.9	76.9	75.5	76.9	79.7	83.1	83.2	76.9
1912	82.7	84.4	84.0	85.1	84.6	86.1	83.6	77.9	70.8	70.1	68.8	66.3	78.7
1913	63.8	68.9	63.2	62.9	62.4	64.1	63.2	60.7	63.0	64.8	63.2	63.4	63.6
1914	62.5	61.7	61.9	63.0	62.9	64.4	63.1	61.0	75.4	79.0	80.1	86.5	68.5
1915	90.2	100.6	105.4	100.4	101.9	98.1	93.7	89.0	85.5	81.7	85.7	83.4	93.0
1916	85.3	88.3	85.6	83.6	83.7	83.8	83.3	83.4	99.7	104.1	115.3	122.1	93.2
1917	118.5	123.5	126.0	135.6	164.1	183.0	177.1	178.1	161.9	169.8	168.8	166.0	156.0
1918	170.3	174.8	201.0	235.1	221.1	187.6	169.9	163.9	159.3	154.0	152.6	151.6	178.4
1919	150.7	140.4	132.2	145.8	155.5	143.7	138.6	149.7	138.3	135.8	129.8	133.2	141.3
1920	152.3	154.5	145.0	156.1	183.1	183.9	189.0	168.6	168.9	162.3	142.1	126.8	161.1
1921	124.7	131.5	126.1	118.7	105.3	112.2	103.8	98.1	89.9	88.6	74.6	70.2	103.6
1922	69.6	70.4	83.5	84.2	87.6	88.0	77.6	70.5	63.3	63.2	67.2	69.2	74.5
1923	72.2	71.1	70.8	69.4	72.1	66.3	58.2	54.4	56.2	58.2	59.5	64.7	64.4
1924	63.5	64.5	62.8	60.4	60.1	61.6	68.8	79.8	80.1				

TABLE CXVII

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR RYE IN THE UNITED STATES

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	105	105	107	106	104	102	103	106	103	99	98	96	103
1911	103	100	101	104	105	106	106	108	107	109	113	112	106
1912	116	116	117	117	117	117	116	111	98	96	94	89	109
1913	89	95	88	87	87	87	87	87	88	88	86	85	88
1914	88	85	87	87	87	88	87	87	105	108	109	117	95
1915	126	138	147	138	141	133	130	127	119	111	117	112	128
1916	119	121	120	115	116	114	115	119	138	142	157	165	129
1917	166	170	176	187	228	249	245	255	225	232	230	224	215
1918	239	240	281	324	307	255	235	234	221	210	208	204	246
1919	211	193	185	201	216	196	192	214	192	185	177	181	195
1920	213	212	203	215	254	250	261	241	235	221	194	172	223
1921	175	181	176	163	146	153	144	140	125	121	102	95	143
1922	97	97	117	116	121	120	107	101	88	86	92	93	103
1923	101	98	99	96	100	90	80	78	78	79	81	87	89
1924	89	89	88	83	83	84	95	114	111				

TABLE CXVIII

PRICES PAID TO PRODUCERS FOR BUCKWHEAT IN THE UNITED STATES

Cents per Bushel

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	70.6	71.0	70.7	72.2	73.1	75.7	79.0	77.6	74.6	72.7	71.6	71.3	73.3
1910	70.0	72.0	70.6	73.4	71.0	73.7	78.0	74.8	72.6	71.3	65.9	66.1	71.6
1911	65.8	64.4	64.1	65.3	65.8	70.1	72.4	76.0	74.0	69.6	73.0	72.6	69.4
1912	73.7	73.6	76.9	76.9	79.9	84.8	86.2	83.6	76.6	69.7	65.5	66.1	76.1
1913	66.8	69.4	67.0	68.3	71.4	70.8	72.9	72.4	70.0	74.1	75.5	75.5	71.2
1914	76.6	75.6	75.1	76.9	77.3	79.0	85.5	81.2	79.8	78.7	78.0	76.4	78.3
1915	77.9	83.7	85.5	85.3	84.6	86.9	92.1	89.2	81.4	73.7	78.5	78.7	83.1
1916	81.5	80.7	83.2	83.1	84.9	87.0	93.1	89.0	86.4	90.4	102.9	112.7	89.6
1917	117.2	114.6	124.8	128.3	150.6	183.7	209.2	189.3	164.3	154.4	154.2	160.0	154.2
1918	162.7	161.9	168.2	170.1	176.0	191.0	200.8	192.7	190.3	180.0	173.0	166.5	177.8
1919	162.9	158.1	148.4	149.6	147.3	165.6	160.8	165.9	159.8	162.0	151.0	146.1	156.6
1920	150.7	154.9	155.7	163.1	168.8	180.2	202.7	181.3	176.3	159.4	131.0	128.3	162.8
1921	125.4	118.7	116.3	109.3	115.9	116.1	115.3	119.7	114.4	106.0	83.9	81.2	110.2
1922	83.5	85.4	85.8	92.6	93.3	97.5	102.6	95.7	86.3	84.1	80.3	88.5	89.6
1923	89.5	87.5	89.8	95.8	94.5	102.2	102.4	100.3	98.5	94.7	93.6	93.3	95.2
1924	92.7	92.5	94.7	93.6	97.0	96.5	104.5	123.9	118.8				

TABLE CXIX

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR BUCKWHEAT
IN THE UNITED STATES

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	99	101	100	102	97	97	99	96	97	98	92	93	98
1911	93	91	91	90	90	93	92	98	99	96	102	102	95
1912	104	104	109	107	109	112	109	108	103	96	91	93	104
1913	95	98	95	95	98	94	92	93	94	102	105	106	97
1914	108	106	106	107	106	104	108	105	107	108	109	107	107
1915	110	118	121	118	116	115	117	115	109	101	110	110	113
1916	115	114	118	115	116	115	118	115	116	124	144	158	122
1917	166	161	177	178	206	243	265	244	220	212	215	224	210
1918	230	228	238	236	241	252	254	248	255	248	242	234	243
1919	231	223	210	207	202	219	204	214	214	223	211	207	214
1920	213	218	220	226	231	238	257	234	236	219	183	181	222
1921	178	167	164	151	159	153	146	154	153	146	117	114	150
1922	118	120	121	128	128	129	130	123	116	116	112	124	122
1923	127	123	127	133	129	135	130	129	132	130	131	131	130
1924	131	130	134	130	133	127	132	160	159				

TABLE CXX

PRICES PAID TO PRODUCERS FOR FLAXSEED IN THE UNITED STATES

Cents per Bushel

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	162.0	170.9	173.8	173.2	176.3	175.6	167.4	170.7	170.7	167.4	162.2	154.9	168.8
1910	171.2	192.9	193.1	193.9	209.5	195.5	183.5	209.7	220.0	234.3	229.4	231.7	205.4
1911	221.1	233.9	240.7	234.6	241.9	225.0	205.6	199.2	203.6	205.0	210.6	182.1	216.9
1912	187.1	190.8	183.9	191.3	181.0	205.0	198.4	175.2	162.6	147.7	133.4	114.7	172.6
1913	106.2	109.3	119.0	113.6	114.3	115.8	113.4	118.6	127.8	122.6	118.7	119.9	116.6
1914	124.2	127.8	132.5	132.8	134.7	136.8	136.0	150.7	139.3	127.4	118.7	126.0	132.2
1915	134.8	163.7	157.9	167.7	169.6	169.5	152.5	144.6	143.5	148.1	162.9	174.0	157.4
1916	185.9	210.9	202.5	202.1	191.8	176.5	163.2	178.1	190.2	199.2	234.7	248.6	198.6
1917	250.7	253.7	253.1	266.1	300.6	298.8	278.0	271.6	302.8	308.5	295.9	296.6	281.4
1918	310.8	326.7	349.8	379.7	373.3	363.6	349.3	410.5	381.2	380.9	333.8	340.1	358.3
1919	327.7	310.1	327.4	348.7	361.4	389.3	444.1	540.6	517.5	438.2	382.3	438.3	402.2
1920	433.6	456.5	472.7	455.7	448.2	421.1	359.6	303.7	290.3	279.7	240.1	176.7	361.5
1921	163.7	156.3	150.4	142.6	125.7	145.7	145.8	162.1	164.8	162.5	145.0	144.6	150.8
1922	151.1	173.1	216.2	218.7	230.6	236.9	223.0	211.4	190.1	188.1	210.7	211.4	205.1
1923	224.2	235.6	255.1	268.0	291.0	255.2	241.7	215.9	204.8	212.1	212.1	210.8	235.5
1924	218.8	224.9	223.7	217.7	222.6	213.1	218.1	210.2	201.2				

TABLE CXXI

INDEX NUMBERS OF THE PRICES PAID TO PRODUCERS FOR FLAXSEED
IN THE UNITED STATES

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	106	113	111	112	119	111	110	123	129	140	141	150	122
1911	136	137	138	135	137	128	123	117	119	122	130	118	128
1912	115	112	106	110	103	117	118	103	95	88	82	74	102
1913	66	64	68	66	65	66	68	69	75	73	73	77	69
1914	77	75	76	77	76	78	81	88	82	76	73	81	78
1915	83	96	91	97	96	97	91	85	84	88	100	112	93
1916	115	123	117	117	109	101	97	104	111	119	145	160	118
1917	155	148	146	154	171	170	166	159	177	184	182	191	167
1918	192	191	201	219	212	207	209	240	223	228	206	220	212
1919	202	181	188	201	205	222	265	317	303	262	236	283	238
1920	268	267	272	263	254	240	215	178	170	167	148	114	214
1921	101	91	87	82	71	83	87	95	97	97	89	93	89
1922	93	101	124	126	131	135	133	124	111	112	130	136	122
1923	138	138	147	155	165	145	144	126	120	127	131	136	140
1924	135	132	129	126	126	121	130	123	118				

TABLE CXXII

PRICES PAID TO PRODUCERS FOR BEANS IN THE UNITED STATES

Dollars per Bushel

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	2.25	2.22	2.18	2.19	2.27	2.31	2.30	2.30	2.29	2.26	2.24	2.29	2.26
1910	2.23	2.23	2.17	2.16	2.17	2.29	2.34	2.27	2.28	2.25	2.14	2.20	2.23
1911	2.20	2.23	2.17	2.20	2.17	2.19	2.23	2.20	2.26	2.27	2.34	2.42	2.24
1912	2.38	2.38	2.42	2.37	2.52	2.62	2.47	2.40	2.38	2.34	2.25	2.31	2.40
1913	2.26	2.19	2.10	2.11	2.18	2.23	2.22	2.11	2.08	2.25	2.20	2.12	2.17
1914	2.17	2.09	2.05	2.11	2.31	2.23	2.22	2.54	2.46	2.17	2.28	2.40	2.25
1915	2.63	3.02	2.89	2.81	2.93	2.87	2.75	2.67	2.70	2.93	3.03	3.30	2.88
1916	3.47	3.43	3.34	3.42	3.56	3.72	5.09	4.59	4.60	4.47	5.53	5.77	4.25
1917	5.71	6.07	6.49	7.37	8.94	8.99	8.07	7.29	6.69	7.48	7.33	7.00	7.29
1918	7.00	7.08	6.95	6.95	6.67	6.28	5.88	6.11	5.67	5.52	5.46	4.86	6.20
1919	4.98	4.52	4.40	4.44	4.19	4.39	4.25	4.30	4.36	4.27	4.42	4.41	4.41
1920	4.70	4.47	4.32	4.41	4.36	4.49	4.47	4.17	3.83	3.47	3.27	2.99	4.08
1921	2.95	2.85	2.89	2.69	2.73	2.82	2.75	2.83	2.99	2.87	2.85	2.83	2.84
1922	2.86	3.04	3.64	3.77	4.02	4.48	4.29	4.09	3.22	3.36	3.71	3.91	3.70
1923	4.24	4.42	4.30	4.32	4.26	4.05	3.94	3.62	3.78	3.87	3.83	3.44	4.01
1924	3.49	3.56	3.47	3.50	3.48	3.38	3.28	3.52	3.72				

TABLE CXXIII

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR BEANS IN THE UNITED STATES

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	99	100	100	99	96	99	102	99	100	100	96	96	99
1911	98	100	100	100	96	95	97	96	99	100	104	106	99
1912	106	107	111	108	111	113	107	104	104	104	100	101	106
1913	100	99	96	96	96	97	97	92	91	100	98	93	96
1914	96	94	94	96	102	97	97	110	107	96	102	105	100
1915	117	136	133	128	129	124	120	116	118	130	135	144	127
1916	154	155	153	156	157	161	221	209	201	198	247	252	188
1917	254	273	298	337	394	389	351	317	292	331	327	306	323
1918	311	319	319	317	294	272	256	266	248	244	244	212	274
1919	221	204	202	203	185	190	185	187	190	189	197	193	195
1920	209	201	198	201	192	194	194	181	167	154	146	131	181
1921	131	128	133	123	120	122	120	123	131	127	127	124	126
1922	127	137	167	172	177	194	187	178	141	149	166	171	164
1923	188	199	197	197	188	175	171	157	165	171	171	150	177
1924	155	160	159	160	153	146	143	153	162				

TABLE CXXIV

PRICES PAID TO PRODUCERS FOR HAY IN THE UNITED STATES

Dollars per Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	11.74	12.01	12.03	12.10	12.23	12.33	12.00	11.56	11.64	11.62	11.64	12.35	11.94
1910	10.45	11.34	11.61	11.53	11.08	10.84	10.75	10.75	11.21	11.12	11.20	12.14	11.16
1911	11.69	11.80	11.57	11.36	11.69	12.38	13.19	13.83	13.63	13.53	13.61	14.29	12.71
1912	13.75	14.39	14.66	15.64	16.31	16.22	14.32	12.03	11.21	11.02	11.08	11.79	13.54
1913	11.11	10.86	10.61	10.43	10.42	10.55	10.47	10.43	11.04	11.45	11.51	12.43	10.94
1914	11.70	11.67	11.69	11.52	11.63	11.64	11.29	10.76	11.10	10.96	10.78	11.12	11.32
1915	10.47	10.83	10.89	10.98	11.03	11.16	10.85	10.19	9.95	9.83	9.98	10.63	10.57
1916	10.07	10.55	10.75	10.85	11.27	11.47	11.10	9.89	9.72	9.65	9.99	11.22	10.54
1917	10.86	11.34	11.54	12.53	13.94	14.68	13.96	12.90	13.26	13.83	15.16	17.09	13.42
1918	18.09	18.88	19.14	18.68	17.97	17.13	16.07	15.92	17.42	18.45	19.27	20.13	18.10
1919	19.92	19.79	19.82	20.52	22.31	23.30	21.73	20.16	20.52	19.79	19.36	20.08	20.61
1920	20.55	21.76	22.31	22.94	24.22	24.85	23.62	20.89	19.88	18.04	17.45	17.76	21.26
1921	16.16	15.24	14.28	13.61	13.08	12.52	12.61	11.73	11.70	11.36	11.13	12.13	12.96
1922	11.33	11.36	11.80	12.30	12.98	12.65	11.91	10.97	10.58	10.78	10.96	12.59	11.68
1923	11.84	12.12	11.96	12.40	12.69	12.95	11.69	11.87	12.08	12.42	12.45	13.05	12.29
1924	13.59	13.60	13.63	13.73	13.65	13.75	13.49	12.95	12.68				

TABLE CXXV

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR HAY IN THE UNITED STATES

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	89	94	97	95	91	88	90	93	96	96	96	98	93
1911	100	98	96	94	96	100	110	120	117	116	117	116	106
1912	117	120	122	129	133	132	119	104	96	95	95	95	113
1913	95	90	88	86	85	86	87	90	95	99	99	101	92
1914	100	97	97	95	95	94	94	93	95	94	93	90	95
1915	89	90	91	91	90	91	90	88	85	85	86	86	89
1916	86	88	89	90	92	93	92	86	84	83	86	91	88
1917	93	94	96	104	114	119	116	112	114	119	130	138	112
1918	154	157	159	154	147	139	134	138	150	159	166	163	152
1919	170	165	165	170	182	189	181	174	176	170	166	163	173
1920	175	181	185	190	198	202	197	181	171	163	150	143	178
1921	138	127	119	112	107	102	105	101	101	98	96	98	109
1922	97	95	98	102	106	103	99	95	91	93	94	102	98
1923	101	101	99	102	104	105	97	103	104	107	107	106	103
1924	116	113	113	113	112	111	112	112	109				

TABLE CXXVI

PRICES PAID TO PRODUCERS OF COTTONSEED IN THE UNITED STATES

Dollars per Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	21.90	21.95	22.21	22.70	22.53	21.94	21.47	19.72	19.38	19.78	19.42	21.00	20.66
1911	26.35	25.61	25.49	26.12	25.46	23.38	22.70	20.45	18.09	16.73	16.69	16.70	21.98
1912	16.57	16.81	18.21	18.62	19.21	19.24	19.04	18.02	17.61	18.04	18.57	21.42	18.45
1913	21.98	22.01	21.55	21.89	21.88	21.54	21.37	20.24	21.07	22.01	22.46	23.48	21.79
1914	22.70	23.37	23.60	24.17	23.56	23.62	22.78	20.16	13.88	15.28	14.01	17.73	20.41
1915	19.14	23.33	22.32	22.69	22.07	20.82	20.05	20.14	20.98	33.73	34.01	35.54	24.57
1916	36.85	36.75	36.56	38.13	37.91	35.79	36.06	35.22	41.13	47.19	55.82	56.35	41.15
1917	52.53	51.43	53.18	55.94	55.61	57.19	56.90	56.61	57.58	65.02	69.38	68.29	58.31
1918	67.51	66.95	68.27	68.08	68.16	66.03	64.11	61.34	67.90	65.85	64.97	65.05	66.19
1919	64.93	64.65	64.00	64.28	63.83	63.80	64.24	66.23	62.13	66.95	72.65	69.07	65.56
1920	69.88	69.34	67.18	68.71	69.88	66.16	61.64	43.22	29.96	28.94	26.00	19.83	51.73
1921	18.96	19.76	18.92	17.23	17.28	17.06	18.75	22.06	27.19	31.05	29.15	28.78	22.18
1922	29.24	30.17	32.72	40.79	40.21	37.71	36.92	32.44	25.37	31.79	40.18	42.93	35.04
1923	43.35	45.16	46.32	47.60	46.58	43.14	41.42	37.47	40.88	40.90	45.92	45.54	43.69
1924	44.37	43.27	41.31	40.42	40.53	39.96	39.07	38.44	31.74				

TABLE CXXVII

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR COTTONSEED PER TON
IN THE UNITED STATES

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	...	...	...	...	...	...	...	...	135	136	131	122	
1911	120	117	115	115	113	107	106	104	93	85	86	80	106
1912	76	77	82	82	85	88	89	91	91	91	96	102	89
1913	100	100	97	96	97	98	100	103	109	111	116	112	105
1914	104	106	106	106	105	108	106	102	72	77	72	84	99
1915	87	106	100	100	98	95	93	102	108	171	175	169	119
1916	168	167	165	168	168	163	168	179	212	239	287	268	199
1917	240	234	239	246	247	261	265	287	297	329	357	325	282
1918	308	305	307	300	303	301	299	311	350	333	335	310	320
1919	296	295	288	283	283	291	299	336	321	338	374	329	317
1920	319	316	302	303	310	302	287	219	155	146	134	94	250
1921	87	90	85	76	77	78	87	112	140	157	150	137	107
1922	134	137	147	180	178	172	172	165	131	161	207	204	170
1923	198	206	209	210	207	197	193	190	211	207	236	217	211
1924	203	197	186	178	180	182	182	195	164				

TABLE CXXVIII

PRICES PAID TO PRODUCERS FOR TOBACCO AND INDEX NUMBERS OF PRICES,
DECEMBER 1ST

Year	Cents per Pound	Index Numbers 1910-14 = 100	Year	Cents per Pound	Index Numbers 1910-14 = 100	Year	Cents per Pound	Index Numbers 1910-14 = 100
1910	9.3	90	1915	9.1	87	1920	21.2	204
1911	9.4	91	1916	14.7	141	1921	19.9	191
1912	10.8	104	1917	24.0	230	1922	23.2	223
1913	12.8	119	1918	28.0	269	1923	20.3	195
1914	9.8	94	1919	39.0	375			

TABLE CXXIX

PRICES PAID TO PRODUCERS FOR APPLES IN THE UNITED STATES

Cents per Bushel

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	96.9	103.0	108.4	114.4	122.6	122.8	102.3	79.0	70.2	69.0	72.4	77.1	94.8
1910	...	108.8	112.6	114.2	120.7	119.6	94.4	75.4	73.7	75.5	83.4	89.6	97.9
1911	108.0	117.2	121.6	131.8	139.2	137.5	115.1	83.9	71.6	68.0	69.4	72.1	103.0
1912	89.4	95.8	101.2	109.2	121.8	118.4	95.2	75.0	64.8	61.8	62.4	66.3	88.4
1913	73.4	76.4	80.4	83.7	89.5	97.6	93.6	80.6	75.8	81.0	90.0	98.1	85.0
1914	107.1	116.8	126.0	133.0	141.8	141.0	113.4	79.9	65.1	58.8	56.6	59.4	99.9
1915	68.0	71.2	73.2	76.8	85.4	90.4	84.4	70.1	59.9	62.0	69.2	69.0	73.3
1916	79.7	88.0	92.0	94.9	98.0	105.4	108.1	80.4	77.7	83.1	87.6	91.2	90.5
1917	101.1	110.0	123.3	133.0	149.8	157.2	151.1	127.0	107.8	106.8	117.5	121.5	125.5
1918	128.8	140.1	145.3	151.9	154.8	158.2	150.4	128.1	123.7	133.5	138.6	132.8	140.5
1919	147.7	160.4	175.4	201.6	224.5	237.3	197.7	174.7	162.0	171.1	182.8	183.6	185.2
1920	213.8	214.7	231.8	260.1	285.5	297.0	280.7	198.4	137.4	132.8	130.0	114.8	207.9
1921	118.6	128.4	130.5	134.4	142.2	169.2	170.0	171.2	163.6	186.9	213.9	168.5	158.1
1922	180.6	181.7	197.4	199.4	209.1	213.4	199.3	133.6	109.8	109.6	98.5	99.3	161.0
1923	114.8	124.0	136.0	147.1	161.0	173.9	182.1	131.2	111.4	115.1	105.0	102.2	133.7
1924	121.3	125.0	129.0	129.0	131.3	159.3	141.3	122.0	110.0				

TABLE CXXX

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR APPLES IN THE UNITED STATES

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	110	106	104	100	98	97	92	95	105	109	115	116	103
1911	111	114	112	115	114	112	113	106	102	99	96	94	109
1912	92	93	93	95	99	96	93	95	92	90	86	86	93
1913	76	74	74	73	73	79	91	102	108	117	124	127	90
1914	111	113	116	116	116	115	111	101	93	85	78	77	105
1915	70	69	68	67	70	74	83	89	85	90	96	89	77
1916	82	85	85	83	80	86	106	102	111	120	121	118	95
1917	104	107	114	116	122	128	148	161	154	155	162	158	131
1918	133	136	134	133	126	129	147	162	176	193	191	172	148
1919	152	156	162	176	183	193	193	221	231	248	252	242	195
1920	221	208	214	227	233	242	274	251	196	192	180	147	219
1921	122	125	120	117	116	138	166	217	233	271	295	219	167
1922	186	176	182	174	171	174	195	169	156	159	136	129	170
1923	118	120	125	129	131	142	178	166	159	167	145	133	141
1924	125	121	119	113	107	130	138	154	157				

TABLE CXXXI

PRICES PAID TO PRODUCERS FOR CABBAGE IN THE UNITED STATES

Dollars per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	1.69	1.80	1.87	2.04	2.15	2.42	2.56	2.03	1.68	1.45	1.33	1.50	1.88
1910	1.87	2.05	2.14	2.29	2.77	2.19	2.27	1.89	1.94	1.58	1.36	1.49	1.99
1911	1.56	1.48	1.26	1.33	1.38	2.46	2.93	2.47	1.94	1.58	1.51	1.83	1.81
1912	1.89	2.24	2.88	3.17	2.98	2.67	2.29	1.88	1.25	1.08	1.04	1.15	2.04
1913	1.26	1.17	1.03	1.15	1.58	2.18	2.64	2.15	1.79	1.69	1.58	1.75	1.66
1914	1.87	2.07	2.03	2.24	2.05	2.61	2.66	1.74	1.50	1.31	1.14	1.26	1.87
1915	1.36	1.41	1.38	1.99	2.53	2.34	1.95	1.61	1.24	1.00	.97	1.07	1.57
1916	1.17	1.21	1.38	1.50	1.93	2.27	2.15	2.26	2.17	2.40	2.61	3.04	2.01
1917	3.95	5.65	6.77	7.61	7.53	5.10	3.23	2.19	1.76	1.79	2.66	2.28	4.21
1918	2.74	3.26	2.86	2.98	3.23	3.55	3.41	2.96	2.45	2.16	1.99	2.05	2.80
1919	2.19	2.33	2.71	3.79	4.97	4.68	4.23	3.73	3.08	2.88	2.74	3.49	3.40
1920	4.31	5.05	5.25	5.59	6.75	5.47	4.71	3.28	2.03	1.95	1.67	1.77	3.99
1921	1.91	1.86	1.71	2.03	3.10	4.04	3.95	3.16	2.61	2.39	2.42	2.77	2.66
1922	3.05	3.09	3.02	3.10	3.68	3.36	2.96	2.12	1.72	1.55	1.46	1.63	2.56
1923	2.11	2.42	3.00	3.62	4.01	4.11	3.85	3.20	2.90	2.59	2.12	2.30	3.02
1924	2.56	2.76	3.01	3.28	3.50	3.57	3.16	2.76	2.34				

TABLE CXXXII

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR CABBAGE
IN THE UNITED STATES

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	111	114	114	112	129	90	89	93	115	109	102	99	106
1911	92	82	67	65	64	102	114	122	115	109	114	122	96
1912	112	124	154	155	139	110	89	93	74	74	78	77	109
1913	75	65	55	56	73	90	103	106	107	117	119	117	88
1914	111	115	109	110	95	108	104	86	89	90	86	84	99
1915	80	78	74	98	118	97	76	79	74	69	73	71	84
1916	69	67	74	74	90	94	84	111	129	166	196	203	107
1917	234	314	362	373	350	211	126	108	105	123	200	152	224
1918	162	181	153	146	150	147	133	146	146	149	150	137	149
1919	130	129	145	186	231	193	165	184	183	199	206	233	181
1920	255	281	281	274	314	226	184	162	121	134	126	119	212
1921	113	103	91	100	144	167	154	156	155	165	182	185	141
1922	180	172	161	152	171	139	116	104	102	107	110	109	136
1923	125	134	160	177	186	170	150	158	173	179	159	153	161
1924	151	153	161	161	163	148	123	136	139				

TABLE CXXXIII

PRICES PAID TO PRODUCERS FOR ONIONS IN THE UNITED STATES

Cents per Bushel

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	103	113	119	127	130	126	122	112	100	96	96	101	112
1910	94	100	92	103	103	106	104	100	99	93	95	99	99
1911	101	104	105	119	129	134	122	116	104	102	103	113	113
1912	117	140	167	175	177	155	114	100	89	85	84	84	124
1913	82	78	77	79	87	96	102	105	104	110	115	115	96
1914	121	141	155	159	153	141	170	138	103	88	84	92	129
1915	89	98	95	104	103	103	93	86	83	95	95	100	95
1916	113	126	130	124	123	134	147	134	123	131	154	176	135
1917	208	358	476	496	398	308	201	155	143	158	177	177	271
1918	179	183	147	134	135	139	163	165	163	143	143	132	152
1919	134	155	200	202	230	234	232	226	195	196	212	246	205
1920	281	307	326	344	338	264	205	176	173	159	144	131	237
1921	135	131	114	98	107	138	148	159	168	187	220	245	154
1922	264	325	366	470	331	271	204	157	127	119	124	132	241
1923	160	173	174	197	201	221	208	185	179	186	175	178	186
1924	181	183	181	174	184	155	176	169	162				

TABLE CXXXIV

INDEX NUMBERS OF THE PRICES PAID TO PRODUCERS FOR ONIONS
IN THE UNITED STATES

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	91	88	77	81	79	84	85	89	99	97	99	98	88
1911	98	92	88	94	99	106	100	104	104	106	107	112	101
1912	114	124	140	138	136	123	93	89	89	89	88	83	111
1913	80	69	65	62	67	76	84	94	104	115	120	114	86
1914	117	125	130	125	118	112	139	123	103	92	88	91	115
1915	86	87	80	82	79	82	76	77	83	99	99	99	85
1916	110	112	109	98	95	106	120	120	123	136	160	174	121
1917	202	317	400	391	306	244	165	138	143	165	184	175	242
1918	174	162	124	106	104	110	134	147	163	149	149	131	136
1919	130	137	168	159	177	186	190	202	195	204	221	244	183
1920	273	272	274	271	260	210	168	157	173	166	150	130	212
1921	131	116	96	77	82	110	121	142	168	195	229	243	138
1922	256	288	308	370	255	215	167	140	127	124	129	131	215
1923	155	153	146	155	155	175	170	165	179	194	182	176	166
1924	176	162	152	137	142	123	144	151	162				

TABLE CXXXV

PRICES PAID TO PRODUCERS FOR PEANUTS IN THE UNITED STATES

Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	4.6	4.9	4.8	5.0	4.9	5.2	5.1	4.9	4.9	4.6	4.5	4.5	4.8
1910	4.9	5.4	5.0	5.4	5.2	5.4	5.2	4.5	4.5	4.6	4.7	4.5	4.9
1911	4.4	5.0	4.8	4.9	4.8	5.2	5.0	5.3	5.1	4.6	4.4	4.4	4.8
1912	4.3	4.7	5.0	4.9	4.9	5.2	4.9	5.0	4.8	4.7	4.7	4.6	4.8
1913	4.6	4.5	4.7	4.8	4.7	5.0	5.1	4.9	4.9	4.8	4.4	4.8	4.8
1914	4.7	4.7	4.7	4.9	5.1	5.1	5.2	4.9	5.0	4.5	4.4	4.3	4.8
1915	4.5	4.4	4.2	4.5	4.8	4.8	4.7	4.5	4.4	4.3	4.2	4.2	4.5
1916	4.3	4.4	4.4	4.6	4.6	4.7	4.6	4.6	4.4	4.4	4.4	4.7	4.5
1917	4.9	5.3	5.5	6.2	7.2	7.7	7.6	7.2	6.6	6.1	7.1	7.1	6.5
1918	7.0	7.2	7.4	8.3	8.2	7.9	7.8	7.9	8.3	6.9	6.6	6.1	7.5
1919	6.0	6.9	7.0	6.9	7.2	7.7	8.2	8.1	8.3	8.1	9.1	9.1	7.7
1920	9.9	10.5	11.2	10.9	11.2	11.2	11.0	8.5	8.0	5.8	5.3	4.7	9.0
1921	4.4	4.1	4.0	3.5	3.4	3.8	3.8	3.9	4.0	4.0	3.7	3.5	3.8
1922	3.6	4.0	4.3	3.9	3.9	4.2	4.4	4.4	4.7	3.6	4.7	5.0	4.2
1923	5.9	6.5	6.7	7.1	7.1	7.3	6.9	6.7	6.7	7.0	6.8	6.2	6.7
1924	6.4	6.7	6.8	6.7	6.4	6.5	6.4	6.6	6.4				

TABLE CXXXVI

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR PEANUTS
IN THE UNITED STATES

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	107	110	104	108	106	104	102	92	92	100	104	100	101
1911	96	102	100	98	98	100	98	108	104	100	98	98	99
1912	93	96	104	98	100	100	96	102	98	102	104	102	99
1913	100	92	98	96	96	96	100	100	100	104	98	107	99
1914	102	96	98	98	104	98	102	100	102	98	98	96	99
1915	98	90	88	90	98	92	92	92	90	93	93	93	93
1916	93	90	92	92	94	90	90	94	90	96	98	104	93
1917	107	108	115	124	147	148	149	147	135	133	158	158	135
1918	152	147	154	166	167	152	153	161	169	150	147	136	155
1919	130	141	146	138	147	148	161	165	169	176	202	202	159
1920	215	214	233	218	229	215	216	173	163	126	118	104	186
1921	96	84	83	70	69	73	75	80	82	87	82	78	79
1922	78	82	90	78	80	81	86	90	96	78	104	111	87
1923	128	133	140	142	145	140	135	137	137	152	151	138	139
1924	139	137	142	134	131	125	125	135	131				

TABLE CXXXVII

PRICES PAID TO PRODUCERS OF BROOM CORN IN THE UNITED STATES

Dollars per Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	103	103	105	105	100	90	96	96	98	94	91	82	97
1910	190	197	200	204	199	151	180	142	139	108	96	93	158
1911	81	80	78	74	81	69	68	72	92	121	124	108	87
1912	100	86	99	101	83	79	85	83	77	70	69	57	82
1913	49	56	57	58	53	61	57	91	106	102	100	92	74
1914	94	95	91	89	85	88	88	91	77	67	66	58	82
1915	66	78	68	71	75	77	79	83	75	86	92	101	79
1916	104	104	104	96	101	102	103	120	129	168	173	172	123
1917	184	201	212	227	252	223	194	308	240	270	296	280	241
1918	249	254	242	222	206	222	235	232	300	265	205	172	234
1919	169	141	174	149	152	106	119	124	154	162	161	163	148
1920	163	123	130	145	146	145	113	142	125	126	123	88	131
1921	70	71	72	69	66	76	75	67	68	72	68	86	72
1922	71	88	80	76	82	87	84	122	175	193	221	238	126
1923	229	256	242	204	223	233	214	195	169	197	161	172	211
1924	131	114	110	106	107	107		171	156				

TABLE CXXXVIII

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR BROOM CORN
IN THE UNITED STATES

Corresponding Months of 1910-14 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	184	191	190	194	199	168	187	148	142	115	105	113	163
1911	79	78	74	70	81	77	71	75	94	129	136	132	90
1912	97	83	94	96	83	88	89	86	79	74	76	70	85
1913	48	54	54	55	53	68	59	95	108	109	110	112	76
1914	91	92	87	85	85	98	92	95	79	71	73	71	85
1915	64	76	65	68	75	86	82	86	77	91	101	123	81
1916	101	101	99	91	101	113	107	125	132	179	190	210	127
1917	179	195	202	216	252	248	202	321	245	287	325	341	248
1918	242	247	230	211	206	247	245	242	306	282	225	210	241
1919	164	137	166	142	152	118	124	129	157	172	177	199	153
1920	158	119	124	138	146	161	118	148	128	134	135	107	135
1921	68	69	69	66	66	84	78	70	69	77	75	105	74
1922	69	85	76	72	82	97	87	127	179	205	243	290	130
1923	222	249	230	242	223	259	223	203	172	210	177	210	218
1924	127	111	105	101	107	119		178	159				

TABLE CXXXIX

PRICES PAID TO PRODUCERS FOR CLOVER SEED IN THE UNITED STATES

Dollars per Bushel

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	8.96	9.44	9.64	9.73	9.47	9.09	8.91	9.02	8.85	8.61	8.50	8.68	9.08
1910	8.26	8.26	8.15	7.91	7.47	7.24	7.17	7.53	8.27	8.13	7.70	7.94	7.84
1911	8.27	8.37	8.56	8.79	8.74	8.80	8.83	9.65	10.19	10.33	10.37	10.62	9.29
1912	10.89	12.22	12.89	12.91	12.53	11.69	10.64	9.80	9.39	9.37	9.06	9.00	10.87
1913	9.41	10.28	10.42	11.00	10.74	9.77	9.78	9.37	7.31	7.00	7.33	7.70	9.18
1914	7.99	8.07	8.17	8.06	7.87	7.96	8.12	8.76	9.10	8.24	8.02	8.12	8.21
1915	8.51	8.60	8.55	8.36	8.14	7.90	7.96	7.94	8.49	9.70	9.67	10.01	8.65
1916	10.27	10.47	10.76	10.58	9.98	9.47	9.15	9.12	8.65	8.54	9.20	9.40	9.63
1917	9.60	9.87	10.32	10.41	10.40	10.29	10.50	10.53	10.89	11.92	12.91	13.53	10.93
1918	14.48	16.46	17.49	17.86	16.56	15.88	14.71	15.20	16.61	19.01	20.03	20.67	17.08
1919	21.55	21.79	22.61	24.81	24.48	23.37	23.25	24.33	25.38	26.47	26.53	27.63	24.35
1920	28.06	31.21	31.88	32.23	29.84	26.21	25.52	19.97	17.77	13.18	11.64	10.28	23.13
1921	10.82	10.61	10.98	10.80	10.71	10.20	10.00	10.37	10.25	10.21	10.09	10.38	10.45
1922	10.69	11.88	13.00	13.13	12.84	11.60	11.00	9.88	8.85	9.66	10.18	10.88	11.13
1923	11.16	11.52	11.71	11.48	11.20	10.84	10.94	10.46	11.07	12.20	12.18	12.22	11.42
1924	12.51	12.67	13.04	11.13	13.07	12.72	12.42	12.09	12.15				

OTHER FARM PRODUCTS

TABLE CXL

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR CLOVER SEED
IN THE UNITED STATES

Corresponding Months of 1910-14=100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	92	88	85	81	79	80	80	83	93	94	91	91	86
1911	92	89	89	90	92	97	99	107	115	120	122	122	102
1912	122	129	134	133	132	129	119	109	106	109	107	104	120
1913	105	109	108	113	113	107	110	104	83	81	86	89	101
1914	89	85	85	83	83	88	91	97	103	96	94	94	90
1915	95	91	89	86	86	87	89	88	96	113	114	115	95
1916	115	111	112	109	105	104	103	101	98	99	108	108	106
1917	107	105	107	107	110	113	118	117	123	138	152	156	120
1918	162	174	181	184	175	175	165	169	188	221	236	238	188
1919	241	231	235	255	259	257	261	270	287	307	312	318	268
1920	313	331	331	331	315	288	286	221	201	153	137	116	255
1921	121	112	114	111	113	112	112	115	116	119	119	120	115
1922	119	126	135	135	136	128	123	110	100	112	120	125	123
1923	125	122	121	118	118	119	123	116	125	142	143	141	126
1924	140	134	135	114	138	140	139	134	137				

TABLE CXLI

PRICES PAID TO PRODUCERS FOR TIMOTHY SEED IN THE UNITED STATES

Dollars per Bushel

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910-14	3.74	3.92	4.07	4.12	4.14	3.98	3.92	3.54	3.42	3.45	3.44	3.38	3.71
1910	.....	.....	.....	.....	.....	.....	.....	.....	3.77	4.03	4.08	4.11	
1911	4.12	4.51	4.93	5.17	5.24	5.24	5.48	6.52	6.65	6.91	6.90	6.72	5.70
1912	6.99	7.26	7.33	7.27	7.16	6.68	5.96	3.20	2.09	1.95	1.82	1.79	4.96
1913	1.79	1.78	1.72	1.74	1.76	1.77	1.94	2.01	2.13	2.02	2.08	2.10	1.90
1914	2.07	2.12	2.30	2.28	2.38	2.23	2.32	2.43	2.46	2.34	2.34	2.18	2.29
1915	2.63	2.66	2.78	2.69	2.75	2.65	2.57	2.56	2.62	2.72	2.91	2.86	2.70
1916	3.05	3.19	3.28	3.51	3.33	3.26	3.08	2.36	2.22	2.27	2.25	2.31	2.84
1917	2.44	2.46	2.70	2.76	3.09	3.09	3.04	3.23	3.31	3.61	3.25	3.37	3.03
1918	3.57	3.78	3.84	3.74	3.84	3.56	3.67	3.87	3.79	4.08	4.26	4.21	3.85
1919	4.34	4.51	4.54	4.69	5.05	4.63	4.49	4.58	4.55	4.78	4.67	4.98	4.65
1920	5.35	5.62	5.61	5.63	5.61	5.46	5.14	4.44	3.52	3.25	3.09	3.16	4.66
1921	3.04	2.75	2.97	2.84	2.90	2.99	2.98	2.71	2.31	2.70	2.41	2.57	2.76
1922	2.70	2.82	2.95	3.11	3.21	2.81	2.53	2.20	2.28	2.48	2.49	2.69	2.69
1923	3.06	2.98	3.00	2.99	2.87	2.92	3.16	2.63	3.01	3.12	3.15	3.19	3.01
1924	3.37	3.56	3.60	3.54	3.48	3.44	3.23	3.20	3.12				

TABLE CXLII

INDEX NUMBERS OF PRICES PAID TO PRODUCERS FOR TIMOTHY SEED
IN THE UNITED STATES

Corresponding Months of 1910-14 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver.
1910	...	...	...	...	...	...	...	...	110	117	119	122	
1911	110	115	121	125	127	132	140	184	194	200	201	199	154
1912	187	185	180	176	173	168	152	90	61	57	53	53	134
1913	48	45	42	42	43	44	49	57	62	59	60	62	51
1914	55	54	57	55	57	56	59	69	72	68	68	64	62
1915	70	68	68	65	66	67	66	72	77	79	85	85	73
1916	82	81	81	85	80	82	79	67	65	66	65	68	77
1917	65	63	66	67	75	78	78	91	97	105	94	100	82
1918	95	96	94	91	93	89	94	109	111	118	124	125	104
1919	116	115	112	114	122	116	115	129	133	139	136	147	125
1920	143	143	138	137	136	137	131	125	103	94	90	94	126
1921	81	70	73	69	70	75	76	77	68	78	70	76	74
1922	72	72	72	75	78	71	65	62	67	72	72	80	73
1923	82	76	74	73	69	73	81	74	88	90	92	94	81
1924	90	91	88	86	84	86	82	90	91				

CHAPTER XXI

FARM WAGES

Farm wages by the month with board.—Wages of farm labor by the month in addition to board, are given in Table CXLIV. For the five years before the war wages averaged \$14 in Alabama and \$31 in Oregon. The other states included in the Table varied between these limits. During the early part of the war, farm wages rose slightly faster than union wage rates. In 1920 the index number of farm wages in the United States was 228. It then fell rapidly and averaged 142 in 1922.

Farm wages in different states.—Wages of farm labor are a compromise between the prices of farm products and the wages in other industries. Near industrial centers and at times of full employment they approach industrial wages. Further from such centers they approach the prices of farm products in the region. Farm wages in North Dakota in 1923 averaged 34 per cent above the five-year pre-war average while the Pennsylvania average was 92 per cent above pre-war. On farms within a few miles of industrial centers, the index numbers for farm wages are practically the same as for city wages.

The average price of farm products in Pennsylvania in 1923 was 38 per cent above pre-war. Farm wages were 92 per cent above pre-war so that farmers who attempted to farm with hired labor were in very serious difficulty.

Wages from the farmer's standpoint.—From 1916 to 1919 the percentage rise in wages was less than the rise in prices of farm products. In any region that had average crops, farm wages were easier to pay than usual. For the United States, for the three years 1917 to 1919, it required only 84 per cent of the pre-war quantity of farm products to hire a man. When prices fell, farm wages fell less rapidly, so that it required more bushels of wheat or pounds of beef than ever before to hire a man for a month. In 1923 the quantity of farm products required to pay

a hired man in Pennsylvania was 39 per cent above the pre-war average. In Oregon it was 40 per cent above. Owing to the high price of cotton, wages in the South were not high in terms of pounds of the product, but owing to low yield, they were high in terms of acres of cotton required to pay the labor.

Wages from the hired man's standpoint.—The hired man is interested in his alternative opportunities. Compared with the pre-war average, farm wages rose more rapidly than union wage rates. In 1918 farm wages would exchange for 25 per cent more city wages than they would during the five years before the war.

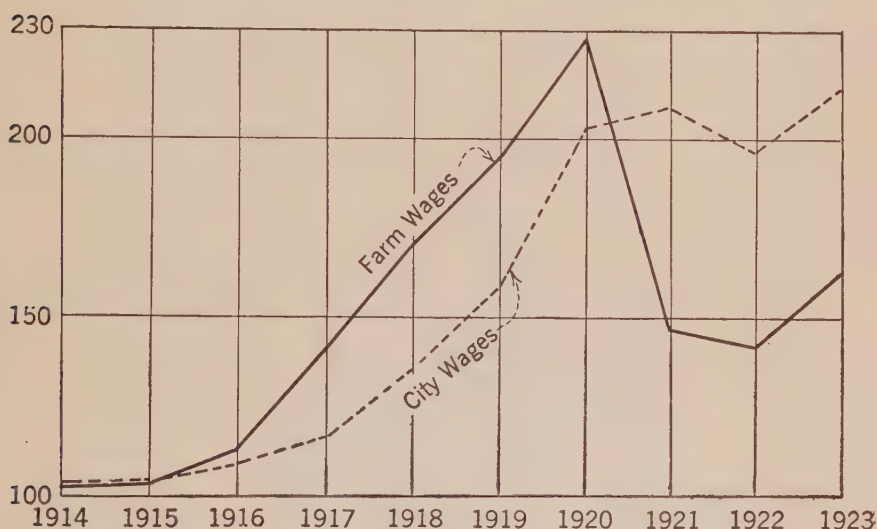


FIG. 95.—Wages of farm and city labor. Farm wages are a compromise between city wages and the prices of farm products.

In 1923 farm wages would exchange for 25 per cent less than the pre-war amount of city wages. From the hired man's viewpoint farm wages were only 75 per cent of what they should have been to compare as favorably with city wages as they did before the war. From the farmer's standpoint they were 18 per cent too high to allow him to pay wages with the usual quantity of farm products.

Wages of farm and city labor.—For farmers, dairy farmers, and stock-raisers, the Census indicates whether the laborer is working on the home farm or working for others. For these groups 79 per cent of the workers were working on the home farm.¹

¹ Abstract of the Fourteenth Census of the United States, 1920, p. 483.

Data from the Census and from various farm-management investigations indicate that over three-fourths of the farm work is done by the farmer and members of his family. The average labor force is approximately two persons—the operator himself, family labor equal to half a man, and hired labor equal to half a man.

The majority of farmers have no regular hired help. Comparatively few have more than one hired man. In eight counties in New York State, in 1917, 26 per cent of the farmers had one hired man, 5 per cent had two, and 2.5 per cent had three or more.²

The farmer works with the hired man and finds it difficult

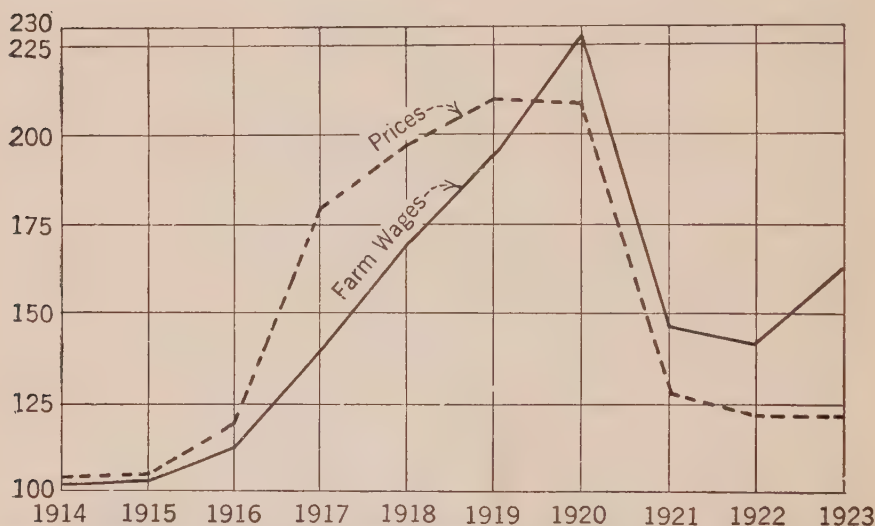


FIG. 96.—Farm wages and prices paid to farmers for food products. Wages rose less rapidly and fell less rapidly than farm prices.

not to share his prosperity with him. Similarly, when the farmer is losing money, the hired man usually knows it and is more willing to accept lower wages than are factory employees, who do not have enough direct contact with the industry to realize its financial condition. For example, in 1920 farmers in the corn and cotton belts suffered more than farmers in wheat and dairy regions. Wages were reduced the following year 40.3 per cent in Iowa and 45.9 per cent in Georgia, but only 34.6 per cent in Oregon and 26.5 per cent in New York.

Wages in general lag behind prices. Farm wages, however,

² Census of the Agricultural Resources of New York, 1919, p. 12.

respond to prices much more quickly than do wages of industrial workers. In 1921 wages of farm workers dropped to 47 per cent above the pre-war level, while wages of city labor were 109 per cent above pre-war. Similar differences occurred after the Civil War.

TABLE CXLIII

INDEX NUMBERS OF WAGES OF CITY WORKERS AND WAGES OF FARM WORKERS
1910-14=10

Year	Farm Labor*	City Labor†	Year	Farm Labor*	City Labor†	Year	Farm Labor*	City Labor†
1914	103	104	1918	170	136	1921	147	209
1915	104	105	1919	194	158	1922	142	197
1916	113	109	1920	228	203	1923	162	215
1917	141	116						

* Wages of male farm workers by the month with board, as reported by the United States Department of Agriculture.

† Index Numbers of Union Wage Rates per Hour of Labor in the United States as of May 15, Monthly Labor Review, Vol. XV, No. 5, p. 1037 (November, 1922), Vol. XVII, No. 6, p. 108 (December, 1923).

TABLE CXLIV

FARM WAGES PER MONTH WITH BOARD

Year	Pennsylvania	Iowa	Oregon	Alabama	Texas	North Dakota	United States
1910-14	\$19.75	\$29.34	\$31.40	\$13.56	\$18.74	\$30.08	\$20.53
1910	18.75	28.00	32.00	13.00	18.00	29.00	19.21
1911	19.20	28.30	31.00	13.70	18.40	28.90	20.18
1912	19.80	29.60	31.00	13.70	19.00	30.30	20.81
1913	20.60	30.70	31.00	14.40	19.20	31.00	21.38
1914	20.40	30.10	32.00	13.00	19.10	31.20	21.05
1915	21.00	31.10	31.30	12.50	18.70	32.00	21.26
1916	24.00	34.10	34.50	12.50	20.40	33.20	23.25
1917	30.00	41.00	44.00	16.00	25.00	41.00	28.87
1918	34.00	50.00	58.00	21.20	31.00	52.00	34.92
1919	37.80	55.00	64.00	25.50	38.80	56.00	39.82
1920	47.00	66.35	68.00	29.30	42.00	70.00	46.89
1921	35.00	39.60	44.50	17.00	26.00	40.00	30.14
1922	33.00	36.80	43.50	17.60	24.20	38.70	29.17
1923	38.00	43.30	52.50	19.90	28.30	40.30	33.18

TABLE CXLV

INDEX NUMBERS OF FARM WAGES PER MONTH WITH BOARD

1910-14 = 100

Year	Pennsyl- vania	Iowa	Oregon	Alabama	Texas	North Dakota	United States
1910	95	95	102	96	96	96	94
1911	97	96	99	101	98	96	98
1912	100	101	99	101	101	101	101
1913	104	105	99	106	102	103	104
1914	103	103	102	96	102	104	103
1915	106	106	100	92	100	106	104
1916	122	116	110	92	109	110	113
1917	152	140	140	118	133	136	141
1918	172	170	185	156	165	173	170
1919	191	187	204	188	207	186	194
1920	238	226	217	216	224	233	228
1921	177	135	142	125	139	133	147
1922	167	125	139	130	129	129	142
1923	192	148	167	147	151	134	162

CHAPTER XXII

VALUE OF FARM LAND

What is farm land?—The Census reports the value of farms in the United States in 1920 to have averaged \$69 per acre. Buildings were worth \$12. The latter figure has been subtracted from the former and the balance called value of land. This has led to a common misunderstanding since many persons have assumed this to be value of land in its natural state—"the indestructible powers of the soil." Land on an active farm is like a manufacturing plant. It includes products in all stages of production. There is plowing done for the next crop, clover and grass seedings of various ages, wheat and orchards. The land includes the manure and fertilizer used in the rotation, the roots of clover and stubble of previous crops for soil improvement. It also includes tile drains, ditches, irrigation works, wells, windmills, fences, roads and innumerable other things. The only man who realizes the number of things included is the man who has bought a farm that lacked all these things and has added them. For large areas in the United States the so-called "land" does not sell for enough to pay for the addition of these things. Since this "land" is largely man made, its price, when more is needed, must have some relationship to the cost of creation.

Value of plow lands.—The United States Department of Agriculture reports for the values of plow lands indicate that in 1916 farm lands in the United States were worth 31 per cent more than for the five-year average 1910 to 1914. The advance in the general price level was 30 per cent. Farm lands, therefore, were stationary in price when measured in terms of many commodities rather than in terms of one commodity (gold). From 1916 to 1918 farm lands advanced much more slowly than the general price level. When the secondary financial inflation occurred in 1919, the belief that prices would never fall became general, just as the belief has now become general that city houses will never again be cheap. In each case a land boom developed.

Prices of plow lands in the United States rose from \$58 per acre in 1916 to \$68 in 1918 and to \$90 in 1920. They declined to \$64 in 1924, or were practically down to the 1916 level. The decline in 1923 was slight.

In New York State the rise in land prices was much less. The average value of plow lands per acre was \$53 in 1916, rose to \$64 in 1920 and fell to \$54 by 1924. For this reason the young men who started farming in New York after they returned from the war lost less heavily than those who bought farms in western states.

On the face of it, the prices as reported indicate that farms are worth slightly more than in 1916, but when prices are rising

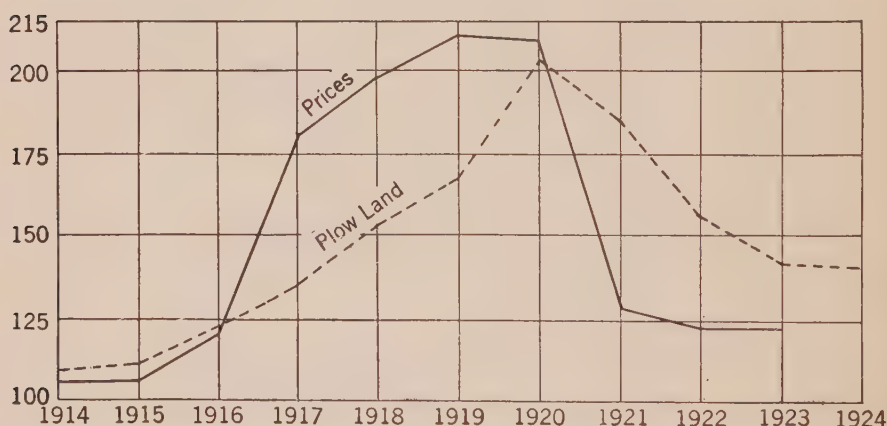


FIG. 97.—Prices of farm land and prices paid to farmers for food products. Farm prices rose more rapidly than farm land and fell more rapidly.

it is easy to sell at the price level, while when prices are falling there are few buyers and anyone who must sell is very fortunate if he can obtain anywhere near the quoted level of prices. In most regions there are practically no buyers as the tenants and young hired men who furnish the usual market for farms are unable to buy. Most of the transfers that are made are transfers to creditors. Of course, farm land will again become salable in time. Good land is one of the soundest investments. It can no more remain at the depth of depression than it could remain at the height of the boom, but in 1924 there was no assurance that the bottom had been reached. Prices of farm products must turn upwards, or farm land will continue to decline.

TABLE CXLVI

INDEX NUMBERS OF VALUE OF PLOW LANDS PER ACRE ON MARCH 1
1910-14=100

Year	Index Numbers	Year	Index Numbers	Year	Index Numbers	Year	Index Numbers
1900	45	1913	103	1917	136	1921	184
1910	93	1914	109	1918	153	1922	156
1911	96	1915	111	1919	167	1923	142
1912	99	1916	123	1920	202	1924	141

Inflation and land values.—The period of secondary inflation was primarily responsible for the boom in land values. When the war was over, prices started to decline and moderate deflation was commonly expected, but when secondary inflation occurred the belief that prices would never fall became almost universal. While the inflation and the optimism engendered by it were the primary causes several secondary causes contributed to the inflation of land prices. Vast credits were advanced by the American Government and by American banks to Europe. The food ministries of European countries bought even more wildly than did individual consumers. They bought such large quantities of many foods that they were unable to get rid of their hoards until the fall of 1921.

In the summer of 1921, England dumped the last of her bacon on the German market. In September, she still had on hand 80 million pounds of butter. In the winter of 1921, when sugar was practically unsalable in this country, Italy was still rationing sugar in order to get rid of her war-time hoards.

Just at the time of the wildest inflation, young men were returning from the army. Many of these married and purchased farms. This increased the demand for farm property. These direct and indirect results of inflation brought on the greatest land boom experienced by the present generation.

Farms were not bought primarily for speculation. Purchases were made by men who normally buy farms, but who normally would not have purchased so soon, that is, the rate at which tenants and hired men purchased farms was several times normal. Thousands of young men returning from the war married, and purchased farms. Normally, many of these would have bought before.

The fact that the slight deflation in 1918 was checked and turned into inflation led to the belief that prices would never fall. Government agencies shared this belief, and the Secretary of Interior proposed a plan to place large numbers of soldiers on the land. Fortunately farm organizations opposed these measures, and they did not become laws.

The purchasing power of plow lands.—The index numbers of the prices of plow lands are given in Table CXLVI. There was considerable advance in the price of lands in 1916 to 1917, a larger advance in 1918 to 1919, and a striking advance in 1920, followed by equally striking declines in 1921 and 1922.

During the four years 1917 to 1919, the value of plow lands advanced much less rapidly than did the prices paid to farmers for farm products. In 1920 plow lands nearly caught up with prices. In 1921 the prices of farm products dropped so rapidly that farm land was about one-third higher than farm products in comparison to pre-war relationships.

In comparison with farm wages plow lands were very cheap in 1923. They were also cheap from 1917 to 1920.

When compared with wholesale prices of non-agricultural commodities plow lands in 1917 were very cheap. They would exchange for only three-fourths of the normal amount. The ratio gradually narrowed. In 1920, plow lands would exchange for 84 per cent of pre-war amount. In 1921 other things fell so fast that plow lands were high. In 1923 plow lands would exchange for 83 per cent of the pre-war amount of non-agricultural products.

A day of work at union wages in 1923 would buy one-half more land than it would have purchased as a five-year average before the war.

To the farm laborer, farm land is cheaper, in terms of wages, than it was before the war. From comparisons with the various index numbers, except prices of food as sold by farmers, farm land appears to be cheap. The fact that wages are high is, however, an unfavorable factor for wages take such a large share of the product that there is little left to pay for fences, buildings, and other investments that go under the name of farm land.

Future of land values.—Unless the prices of food products rise and remain much higher than they were from 1921 to 1923, it is to be expected that farm land will continue to drop in price for some time. With food products as sold by farmers bringing

one-fifth above pre-war, farm wages, 62 per cent above pre-war, farm land at 40 per cent above the pre-war average is too high. The increasing efficiency of agriculture may account for a moderate discrepancy between wages and prices.

Before the war much of the farm land in the United States sold at prices that were beyond the earning power of the land. Land prices had been steadily advancing for a long time and land had come to be looked upon as such a good investment that a portion of the income was expected to be derived from increasing land values. A discontinuance of returns from this source will automatically call for a serious decline in land prices in some regions. If the deflation continues, it is to be expected that farm land will continue to be looked upon as a risky investment, and that the price will drop to a point where the income from land will pay interest on the investment.

Another factor tending to depress the price of land during deflation is the fact that taxes more than doubled. Before the war, taxes took from 10 to 50 per cent of the rents. A very common ratio was one-fifth. When taxes are doubled, even if rents remain stationary, the taxes would take from 20 to 100 per cent of the rent. The high price of labor, machinery, farm supplies, and the like compared with the low prices of farm products cuts the rents so decidedly that there is much land that has no rental value. Much land of this sort stays in use for a time because people are hoping for better returns and because a rental that is less than the taxes is better than no rental so long as one wishes to retain title to one's home. Gradually some such land is being abandoned.

The price of land always lags. When conditions are improving it goes up gradually; when conditions are unfavorable, it becomes very difficult to sell land. The nominal prices do not decline at once. The price of land should be based on its rental value for many future years, just as is the price of a house. Since the future is not known, it is natural that a series of previous years should be the basis of judging land values rather than the past year. When the future differs materially from the past, this common method of judging by the past may become very erroneous.

Many farms are now for sale at such low prices as to make very attractive bargains for one who is ready to start farming. The general average of prices is, however, likely to decline further before the next upswing.

CHAPTER XXIII

ERRONEOUS MEASURES OF FARM CONDITIONS

Value of farm products as a measure of farm conditions.—

The value of all crops is widely used as a measure of farm conditions. This is very misleading. It includes corn, oats and hay that are not sold, and includes wheat and potatoes that are used for seed. If these crops are very high in price the value of the farmer's income is not determined by the theoretical value of the crops he raises but by the actual value of the crops and animals he sells. Corn is frequently cheap when hogs are high. In such a case the farmers are better off than the figures would indicate.

An even worse error is the addition of the corn and the hogs produced from the corn, and the hay and the stock produced from it. To assume that the resulting total represents the income of agriculture is a serious error. Such additions are of interest and may be useful for some purposes, but the cash income of the farmer is, of course, the product of quantities sold times price. It may be interesting to figure the value of the pasture grass and the hay eaten by a steer, but it is the weight of the steer and its price per pound with which the farmer is concerned. Calculations based on the above method are very misleading. Corn may be low in price and hogs high. The sum of the two will then be much too low to represent the farm income.

Even if either of these methods were not grossly misleading, there would still be a serious error in comparing the value of the total product of one year with another and assuming that each yearly increase represents increased prosperity. With the growth in population the total area in crops and the total amount produced are steadily increasing just as the total amount of coal mined is increasing. The increase which comes from additional bushels is not increased prosperity. If it were, the comparison of crop values fifty years ago and now would show farmers to be eight to ten times as prosperous as formerly. Such figures have been used to prepare an index number of purchasing power of farmers.

Comparing the value of the output of agriculture with prices of other commodities.—The total output of agriculture in 1922 at prices of 1913 would buy slightly more of all commodities at prices of 1922 than the smaller output of agriculture in 1913 would have bought at prices then. This method compares physical volume of production times prices in one industry with prices in all industry. The results, showing agriculture to have a purchasing power of 102, were widely heralded.¹

From 1913 to 1922, the physical volume of production of crops increased 14 per cent, and for animal husbandry the increase was 22 per cent. For all industries, as an aggregate, the increase in physical volume of production was 15 per cent.²

If agriculture had to increase its output 14 to 22 per cent, in order to be able to exchange for 2 per cent more goods than in 1917, it certainly did not have a purchasing power above normal. The purchasing power of farm products, in terms of all commodities including farm products, would be $102 \div (114 \text{ to } 122)$, or from about 84 to 89. As calculated from comparative prices in Table XXXII, agricultural products had a purchasing power of 82 for 1922.

Selection of the base period.—Another common error is to use too distant a base. A recent publication used 1900, and again 1891 to 1900, as bases, and used wholesale prices in cities. This basis of comparison shows prices of farm products to be as high as the general price level.³ This method involves several serious errors. It is entirely unsafe to assume that wholesale prices in cities at these two dates indicate what the comparative farm prices were. Taxes and interest charges also are on bases entirely different from those of a generation ago.

Also, great areas of land that were submarginal during the base period have been brought into use at large expense, and increased yields per acre have been obtained by extending the inten-

¹ Tables showing trends in agricultural movements given out as mimeographed sheets at Conference of Agricultural Editors Association with the Department of Commerce, March 1, 1923; William Johnson, *Figures Do Lie*, Country Gentleman, Vol. LVIII, No. 16 (April 21, 1923); R. J. McFall, *Economic Studies* (mimeographed), No. 106 (July, 1923), p. 4.

² Harvard Economic Service, *Review of Economic Statistics*, preliminary Vol. IV, No. 3, p. 216 (July, 1922); preliminary Vol. V, No. 3, p. 196 (July, 1923).

³ The Great "Farm Depression" Myth, *Standard Daily Trade Service*, vol. xxx (October 24, 1923), p. 215.

sive margin, so that agriculture to-day is adjusted to a price level higher than that of a generation ago when compared with other commodities. One could get still different results if one used 1840 as a base period; but such results would have no meaning to the young man who went in debt to start farming in the last seven years, or to the man who laid tile drains, or to the pioneer who developed arid or irrigated land on the basis of pre-war prices.

During the period from 1897 to 1913 the general price level was rising at the rate of over 2 per cent per year based on the middle year as 100. The upward secular trend for most farm products was even more. Very intensive methods came to be used. The entire practice and philosophy of agriculture came to be based on a rising price level. To return to a stable price level would have given agriculture a severe shock.

Judging agriculture in 1924 by conditions in 1920.—An even worse error is to use the census of 1920 and assume that these data apply after four years of agricultural depression. In criticism of Senator Johnson of California because of a reference to the "prosperous East" and "the deflated farmers of the West" the *Washington Post*, Saturday, June 28, 1924, quotes the Census figures of January 1, 1920, as follows:

"According to the census bureau, the agricultural wealth of the country is increasing at a gratifying rate—at a much higher rate than the total wealth of the nation. The total wealth of the United States increased in the eight years from 1912 to 1920 by scarcely 55.1 per cent. If its growth in the preceding two years was at the same rate, we may reckon that for the decade 1910 to 1920 at a fraction under 69 per cent.

"But in that same decade the total value of all farm property in the United States increased by 90.1 per cent, the value of the land alone increased by 92.5 per cent, and the value of implements and machinery increased by 184.1 per cent. Moreover, the average value of individual farms increased by 87.5 per cent, and the average value of farm land per acre increased by 77 per cent.

"Property increasing in value 8 or 9 per cent a year is somewhat too substantial and prosperous to warrant being commiserated and pitied as 'deflated'."

This editorial is typical of the attitude of many city persons who are ignorant of what has happened to agriculture since 1920 and who apparently do not know where to go for information. To

assume that the farmers of 1924 are prosperous because those who were farming in 1920 were prosperous at that time would be highly amusing if the error were not so universal among many persons of influence.

Common interpretations of the agricultural situation.—The following questions asked by a prominent business firm indicate the reasons frequently believed to be the important ones.

“If the farmers of your state are hard pressed, financially, how much of it is due to:

“(a) Having to sell in the world’s open market and to buy in the protected domestic market?

“(b) How much is due to a one-crop system or to the fact that there has been an over-production of the particular crops in which the farmers of a given section specialize?

“(c) To crops being out of balance with each other as corn and hogs for example?

“(d) How much of the farmer’s unfavorable condition can be attributed to a lack of business acumen?”

If the manufactured goods of the world came in free it would lower the prices of certain articles that farmers buy, but so long as the prices of farm products are so low the problem of paying interest and taxes would remain unsolved. In any event, the major portion of his purchases is of products made in America. Europe does not ship grain binders to the United States.

The agricultural depression has been quite as severe in the regions of diversified farming as in other regions. There has been no sudden shift to one crop systems, so that in any event this does not explain why the status of agriculture has changed. If there is lack of diversity in agriculture this lack is nothing new. In the regions that specialize in one crop because it is the most profitable there is much discussion concerning the undesirability of growing that crop. The bankers usually lend to a farmer on the basis of his acreage of this crop. The selection of the proper type of farming is one of the important problems that the farmer has to meet. This problem is not one that originated in 1920. Deflation automatically throws crops out of balance because it makes a phenomenal change in demand. With cheap food, the consumers demand the choicer kinds of foods, more lumber, and less of the staple foods.

In 1921 and 1922, hogs were high relative to corn. In 1923 and 1924, corn was high relative to hogs. The agricultural depression continued. Such cycles have always been going on, but have little to do with the agricultural depression.

There was no sudden decline in business acumen. So far as can be told it was about the same in 1920-24 as in the previous decade. It has in fact been shown that the more highly educated farmers, those who were formerly most prosperous, lost most heavily in the period of depression. The better farmers were in the habit of doing more business and spending more money than the poor farmers. Since the business was very unprofitable those who did the most of it lost the most.⁴

⁴ Warren, G. F. and others—Cost Accounts for Six Years on Some Successful New York Farms, Cornell University Agricultural Experiment Station, Bulletin 414, p. 30, Feb., 1923.

CHAPTER XXIV

OTHER AGRICULTURAL DEPRESSIONS

Drastic deflation always results in agricultural depression.—Never before has such drastic deflation occurred in America, but the deflations following the War of 1812 and the Civil War were sufficient to cause very severe agricultural depressions. The deflation in England following the Napoleonic Wars resulted in a severe agricultural depression.

Extracts from hearings on the agricultural depression, recorded



FIG. 98.—Prices in England for the Napoleonic War period. Prices nearly doubled during the war period, and then gradually declined to below the pre-war level.

in the British Parliamentary Papers, show that the conditions in England following the Napoleonic Wars were similar to the conditions in the United States following the World War. They also show that the causes were as little understood as they are to-day. The depression was attributed to almost everything that is to-day assigned as the cause, except that they could not attribute it to the autos. Almost every remedy now proposed was then discussed. After twenty years of investigation nothing was done about it. History bids fair to repeat itself.

Wages lag behind prices.—When prices are rising or when they are falling, wages lag. Some persons believe that the failure of wages to fall is entirely due to labor unions, or to immigration restrictions; but the same thing has occurred in every country every time inflation and deflation have been tried. Wages remain high when prices suddenly fall. There may, however, be periods of serious unemployment. The conditions when England deflated one hundred years ago were similar to present conditions, as indicated by the testimony concerning labor:

“Did you ever ask an old man whether he thought himself better off now than twenty years ago?—I do not know that I have, but I know they are better off; I should think where they drank one pint of beer when I first farmed, they drink four now.”—Report 1836, p. 185.

“What is the condition of the labourer now, considering the price he pays for the articles he consumes, compared with his condition eight or ten years ago, when he got 1s. a week more wages?—It is a great deal better. . . .

“You think, that though the farmers have suffered by alteration of prices, the labourers are better off?—Yes.

“Is your knowledge of the situation of things during high prices in the war sufficiently accurate also to enable you to speak to the condition of the labourer then and now?—Yes, I can recollect when the labourer ate barley-cake without meat or cheese. I was then quite young, living with my father, but recollect seeing the men come.

“Had they their barrels of cider then as they have now in their cottages?—No, certainly not.”—Report 1833.

“With respect to the wages of artisans in agricultural villages and districts, the blacksmiths, the joiner, the collar-maker and other men, is it not a general fact that the prices of their day's work have not fallen in proportion to the prices of agricultural labour?—I am satisfied of that.”—Mr. Attwood, First Report 1836, p. 56.

“If you pay the farrier's labour as you used to do, they must be particularly well off now that everything is cheap?—They get more than their masters, I am certain.”—J. B. Edmonds, farmer, Report 1821, p. 188.

“Supposing the price to continue at its present depressed state, do you apprehend that the expenses would considerably diminish

from what they now are?—I am hardly able to form an opinion; I should say, they ought to be reduced; but it is a difficult thing when you have got the labourers to high wages to get them down again; for they will go to the rates for relief, and only work on a bargain.”—T. Chapman, land agent, Report 1821, p. 190.

“Then you consider the labouring classes at Liverpool far better off than they were?—I think so, decidedly.”—D. Hodgson, Report 1821, p. 273.

“Amidst the numerous difficulties to which the agriculture in this country is exposed, and amidst the distress which unhappily exists, it is a consolation to your Committee to find that the general condition of the agricultural labourer in full employment is better now than at any former period, his money wages giving him a greater command over the necessaries and conveniences of life.”—Report 1833.

“You state the farmers have reduced the scale of their living; have the labourers reduced theirs?—I do not think they have.”—Report 1833.

With deflation, farm prices fall, but retail prices remain high.—Aside from the inability to meet interest and taxes, the most important inequality resulting from deflation is the fact that prices to the farmer fall, but that wages and handling charges remain high, so that retail prices fall much less than prices paid to farmers, this is a fundamental law that works in all lands and in all times when deflation takes place. In 1920 it may be expressed by saying that farm products had a purchasing power of about three-fourths pre-war. One hundred years ago the farmers had the same trouble and there was a “general buz” about it.

“Has any fall in the price of the different articles necessary in farm houses, taken place?—Very little; but there is a general buz about it.

“Is there any fall in the blacksmith’s prices?—I believe not.

“Nor as to the tanner?—Not to my knowledge.

“The collar-maker?—None.”—Report 1821, p. 72.

“State whether your tradesmen’s charges are reduced in any proportion to the reduction in the price of corn?—They are not.”—L. Tabrum, Report 1821, p. 109.

“Has the price of the other commodities they consume, besides corn, fallen in the same proportion as their wages?—I think the internal trade, such as the butchers, have not lowered their price

so much in the country, as the article has fallen to the grazier. Such as clothes, coats, hats and shoes?—I think not; certainly not.”—T. Orton, farm owner, Report 1821, p. 133.

“There has been a smaller fall in the price of meat than of any other article?—It has unquestionably fallen 20 per cent since 1818; although the butchers in many villages and many places, hold up a species of monopoly, and endeavour to extort the prices they obtained two years ago; yet it is well known, that those prices give them an immense profit, and that soon, the natural effect of competition will be to force down those prices.”—Thomas Attwood, Report 1821, p. 246.

“The prices of clothing and other things they use, have not fallen in the same proportion as grain?—No.

“Do you find in the villages or the town of Beaconsfield the prices of the small mechanics, the wheelwrights and blacksmiths have come down?—They have not come down in proportion in the price of corn; they have come down very little.”—John Rolfe, farmer and appraiser.

“Have your retail prices fallen in proportion to the wholesale prices?—Certainly not.”—J. G. Cooper, farmer, Second Report 1836, p. 67.

“Generally speaking, the retail prices, in which the agriculturist is interested, have not fallen in proportion to the wholesale prices?—Certainly not.”—John Cramp, Third Report 1836, p. 265.

“Are you paying nearly the same price you did when you received good prices for your produce?—Yes, we are; the tradesmen are paid better in proportion to the price of produce than ever they were.”—John Rolfe, First Report 1836, p. 78.

“If iron is lower, are not your farrier’s bills lower?—They ought to be lower; but when we advance our blacksmiths and carpenters on account of things being dear, it is a difficult matter to get them back again.”—J. B. Edmonds, Report 1821, p. 188.

“Are you of opinion that the fall in the price of corn has been more rapid, than the diminution of the expense of the farmer in raising it?—Certainly; I am clearly of opinion that it has been greater.”—Thos. Chapman, land agent, Report 1821, p. 190.

“If the rate of wages has fallen considerably, how do you account for the farmer’s outgoings not being considerably reduced also?—

They are reduced as far as that goes, but that is not the only outgoing a farmer has. . . .

“Have not these several articles of wood, iron and leather, fallen very considerably?—I do not find that the mechanics have reduced their prices to any extent.”—John Iveson, receiver of rents, Report 1821, p. 340.

Changes in demand due to deflation.—When wages are high relative to farm prices the choicer foods are consumed in greater quantity and the commoner foods in less quantity.

“You state that the dearer bread is the more it is consumed, will you explain that?—I employ a great many people, and I am satisfied they do not use so much bread now, by one-fourth, as they did three or four years ago; their wages are not lowered in proportion to the price of bread, therefore the man who has a large family, goes and buys his three pecks of flour, when that was dearer, it would take more of his weekly wages; now it does not take so much, he is enabled to buy meat and beer for his family, they do not in consequence want nearly so much bread; that is my observation on my own labourers.”—First Report 1836, p. 185.

When food falls, clothing is in demand.—In America there is a definite correlation between city industrial conditions and the price of cotton. When there is full employment at high wages, there is a good demand for clothing. If food is very cheap, as was the case in 1923, the demand for clothing is further increased. In this period the boll weevil also had a high demand for cotton. The high price of cotton was not all due to the boll weevil. Certainly the boll weevil was not responsible for the high price of clothing a century ago.

“In Scotland, the business of spinning is very flourishing at present, as will appear by extract of a letter which I have seen from one of the principal merchants of Leith, dated 23d April, 1821; and which, with permission, I will read:

“Our mill spinners are all making fortunes just now, and for twenty years they have never had so prosperous a moment in Dundee, Montrose, etc. They are said to be making about 5d. to 6d. per spindle, or 11d. to 12d. out of what costs them 6d. or 7d. I only wish they may not overdo it, new mills are erecting in Forfarshire, and one was sold the other day for £4,200, which has been these two years in the market, without more than £1,800 being offered for it; with all that, flax keeps low, and as

they all now, who can do it, import their own quantities, it leaves nothing for us Russian merchants to do.”—Thomas Tooke, merchant, Report 1821, p. 546.

“Are any of their necessities of life reduced in price, except food?—No; when I go to my labourers, and say, I cannot pay them so much; they say, we must pay 4d. for salt, and 10s. for a pair of shoes.”—J. B. Edmonds, farmer, Report 1821, p. 188.

“Lambs and sheep sold very well, and they were better off in 1818 than they are now.”—Wm. Custance, Report 1821, p. 206.

When food falls, building booms.—Following the Civil War and again following the World War, when food fell in price and wages remained high, less of the workers’ money being required for food, more was available for housing. This again being a fundamental principle, it is to be expected that lumber would remain high after deflation took place in England. Some persons believe that the rise in prices of building materials following the World War was entirely due to sudden exhaustion of forests. This explanation cannot explain the similar occurrence following the Napoleonic Wars.

“Is timber now falling?—I think there is a less fall in timber than anything else.”—Mr. Custance, Report 1821, p. 208.

“A part of the produce of very large estates generally is not derived from rent, but from timber and other articles of production which the landlord holds in his own hand, and also the woods and coppices; now you have stated that there has been a considerable diminution in the money price of these articles, or some of them?—I think less in timber than in anything else.”—E. Wakefield, Report 1821, p. 218.

Inflation stimulates production—deflation checks production.—For many years prior to 1920 prices were rising and production was stimulated. During that period farmers were urged to produce more, just as English farmers a century ago were urged to plow up their pastures and produce more. In each case during the period of deflation many persons dismissed the agricultural situation with the statement that the depression was due to foolish expansion of production by farmers.

“It is impossible for you to think that altering the yard measure, by calling a foot a yard, will augment the quantity of cloth or linen which is measured by it, although the number of yards of such reduced dimensions would of course be increased; how then

can you think that altering the measure of value, by calling twenty shillings twenty-five shillings, can augment the quantity or rather value of the commodities measured?—Unquestionably an alteration of the value of money, depreciating the standard so as to elevate the prices of property, . . . will have the effect of giving a greater reward to the producers of property, and will therefore cause a greater exertion in effectuating production.”—Thomas Attwood, city man, Birmingham, Report 1821, p. 251.

Inflation makes land readily salable at high prices—deflation makes it unsalable.—During the War of 1812, the Civil War, and the World War, prices of land rose. In each case land became unsalable when deflation came. This is not a peculiarity of American farmers, but is an inevitable result of inflation and deflation. If the pounds were translated into dollars and the stage coach changed to a Ford car, the incident below might have occurred in the West.

“I know an estate in Worcestershire, called Sheriffs Linch, near Evesham; it was purchased by a friend of mine, soon after the year 1800, . . . he sold four hundred acres for eight thousand pounds, and the remaining seven hundred acres, he sold to a gentleman who he met on the top of a stage coach; he took him home, and the following morning he signed the contract, to give him thirty thousand pounds for this property; . . . it afterwards fell into the hands of the first mortgagee, who had lent twenty-six thousand pounds on it; the tenant having failed, and the estate being entirely out of cultivation, . . . he put it up at Garraway’s about two years since, . . . a stranger who was present, made a bidding . . . and it sold to him for thirteen thousand, one hundred pounds.”—Wm. Custance, Report 1821, p. 208.

“Do you know many who have been completely ruined?—Yes, I know many that purchased estates in the dear times, and with agricultural produce, at a good price, that were obliged to sink with the times.”—Mr. Attwood, First Report, 1836, p. 70.

“Did you expect war prices when you bought that land?—I expected a much greater return than unfortunately I had. I was yesterday with a tenant who told me that he could not go on, and that I must take the land myself.”—Mr. Cayley, First Report 1836, p. 73.

“Have not those fatal consequences resulted, mainly, since the period that money has become more valuable?—They were unknown

before. Up to the year 1813, one man might buy his estate dearer than another; but none appeared to be too dear, for they might always be sold a year or two after for a higher price than had been given for them.”—E. Wakefield, Report 1821, p. 214.

“Has any land been sold in your neighbourhood lately?—I have had sales of property myself, but I could not get any person to buy it; some I am trustee for.”—J. B. Edmonds, farmer, Report 1821, p. 188.

“I should like to ask the witness, what he thinks was the greatest rise in the price of land, during the restriction of the cash payments of the Bank?—It rose up to the year 1813, and fell immediately after; . . . there were few properties that were on sale, but what might have found buyers; but since the great fall . . . there have been very few buyers of land; and the alarming state of the country is such, that it is now almost impossible to sell at any price.”—E. Wakefield, Report 1821, p. 209.

“Supposing it was sold by auction what would it fetch?—I know an instance of that that occurred about nine days ago; there was an auction upon an estate, and there was but one bidder for one acre, and the rest of it they could not get a price for it at all, there was never a bidder.”—First Report 1836, p. 67.

Difficulties of landlords and tenants.—In a period of deflation, even though rents are lower, tenants suffer severely. In many cases the tenant would lose if the landlord paid the taxes, kept the buildings in repair, and gave the tenant the free use of the property. Many tenants in the United States have told the landlord just what William Thurnall did on Monday a hundred years ago.

“To what amount do you conceive there has been a depreciation in the value of land, since the year 1813?—In point of rent on arable land, to about thirty per cent since the year 1812; land began to fall in 1813.

“Does the distress more particularly arise on the arable land, or the grazing land?—Much greater on arable land than on grazing land.”—Tom Maughan, land surveyor, Report 1821, p. 102.

“Do you believe many farmers are now paying their rent from their capital instead of their profits?—I am quite convinced that in many instances it has been paid out of capital, and where they had not capital it has been paid out of their stock on their farms, and where they had nothing to depend on but their produce the land has gone out of condition and the rent is in arrear. . . .

"Are many farmers in your neighborhood in arrear?—Many of them.

"That was not the case so much formerly?—No."—John Rolfe, farmer and appraiser, First Report 1836, p. 78.

"Do you know any farms out of occupation now?—Yes, several.

"How many?—I know eight or ten farms out of occupation now; they are in the hands of the landlord, and the landlord would be glad to find a tenant for them."—Wm. Loch, First Report 1836, p. 92.

"Do you think that as yet they have reduced rents equivalent to the reduced price of corn?—If my landlord would offer me my farm rent-free, as we have had the prices lately I would not accept it; I told him so no longer ago than last Monday."—Wm. Thurnall, maltster, miller, oil crusher, general corn merchant, and farmer, First Report 1836, p. 117.

Deflation makes taxes burdensome.—The burden of public improvement, made when prices are high but paid for when prices are low, is always the same in a period of deflation whether the date be 1824 or 1924.

"You refer to the expense of bridges?—Yes; having borrowed money for erecting bridges and other purposes which is unpaid, and the interest for that, causes a considerable county rate to be raised, which but for that debt would not be required, and we are paying to the erection of those bridges, who live perhaps 40 or 50 miles from those bridges, who never use them, and never saw them in our lives. I think it would be a fairer system if those bridges were supported by a toll, to be paid by those who use the bridges."—First Report 1836, p. 22.

The debt burden.—Since all of the purchases of property during a period of inflation are at prices of the day, those who contract debts to be paid after deflation occurs, must pay much more than they anticipated. Since inflation also stimulates buying, the number of debts, as well as the size of them, is increased.

"Did you ever hear, in the course of transactions at that period, either on the part of the land purchasers or of persons who lent money on mortgage, any opinion that the value of money was likely to undergo any great alteration in time of peace?—The rise in prices was gradual, and with the majority of persons, I believe imperceptible, and everybody was acting as if no bad times were ever to take place."—E. Wakefield, Report 1821, p. 214.

“And you knew that gold payments were about to be resumed?”—Yes.

“Do you think that these men had any knowledge that gold payments would produce this effect upon prices?—I do not think they had.

“You think they were in the dark?—Yes.

“They did not know what was coming upon them?—No. . . .

“You think the obligation that was entered into was about 22 years ago?—Yes.

“Do not you think that the party calculated upon a continuance of war prices?—I should say he did.”—First Report 1836, p. 70.

“Those were the high times of war, were not they?—Yes, that is where the great evil has been; farmers having some capital, and looking forward to high prices, have purchased estates, and borrowing the greater part of the money, and now they have to pay the same rate of interest as when their produce was making double what it now makes.”—First Report 1836, p. 73.

“Do you not consider that that circumstance contributed mainly to the very high prices at that period?—I think so. I think the facility with which money could be borrowed at that time, was partly the cause of them. I know no persons more distressed at this time, than farmers who were considered very opulent persons up to the period I am speaking of, namely in 1813. They were persons who purchased their own estates.”—E. Wakefield, Report 1821, p. 213.

“In the counties of England, where yeomen heretofore abounded, occupying their own estates, which estates in many cases had been transmitted from father to son, a great change of property has recently taken place. The high prices of the last war led to speculation in the purchase, improvement, and enclosure of land; money was borrowed on the paternal estate for speculations of this nature, which, at the time, were not considered improvident. Prices have fallen, the debt still remains, or the estate has changed owners, and the interval between the fall of prices and the adjustment of charge and of expenditure to the altered value of money has been most pernicious to this body of men.”—Report 1833.

“Of course you do not speak of improvident men, and men incapable of managing a farm?—No; I know several farmers now that are on the brink of ruin . . . they are, I should say, penniless; they are really hard-working, industrious men, and deserving

of every encouragement; and though they are sinking, it has been from no want of prudence or industry on their part.”—First Report 1836, p. 90

Movement away from farms.—The movement away from farms is always going on, but during deflation the movement is accelerated. The effect of a period of deflation is likely to be followed by a generation of the “high cost of living,” when the old men die and their sons are not present to take their places.

“Are there many persons leaving their farms in consequence of distress, in your neighborhood: and what is the extent of the distress?—There have been several failures in my neighborhood, and some who have it in their power are now leaving their farms; and I believe, that it is only the hope of some relief being granted, that at this time prevents hundreds from leaving their farms.”—John Lousley, farmer, Report 1821, p. 135.

“How many farms are untenanted in your neighborhood?—There are several at St. Lawrence, Maryland, and in other parishes; a great part of Althom parish which is now let.”—John Kemp, farmer, Report 1836, p. 106.

Why continue farming if it does not pay?—Farmers and tenants usually invest all their lifetime savings in their business. To sell out at panic prices and leave the farm often means losing the entire lifetime savings. Farmers therefore hold on in the hope of better times. Leaving not only means the loss of capital, but means the abandonment of home and the taking up of another occupation. To start as a hired man on a farm, or start a new occupation after a man has a family to support, is a very difficult undertaking. The young men who do not have investments, and who do not have families to move, leave in large numbers.

“Many will say, if farming is a losing concern, why do not you leave it?—I answer, we are many of us in situations where we have expended considerable capitals, and we are struggling on in hope of better times; we hope that every succeeding year will bring some relief. To leave at present, we know that our stock and crop will not produce much more than one-half of what it would have done in the year 1813; since which time, we have been mostly declining in our circumstances. Immediately after the harvest of 1813, I estimated my stock and crop at about £10,000; a similar stock and crop at the present prices, supposing the same in quantity and quality, would not exceed £6000; and some part of

the time, 1816 for instance, would not have exceeded £5000;"—Wm. Stickney, farmer, Report 1821, p. 157.

"A farmer remains in the farm till he is driven to desperation, rather than leave it.—There are many who have invested a large capital in farms, that are anxious to remain in, with a hope that the times will improve."—Thos. Chapman, land agent, Report 1821, p. 191.

"And does not, on the other hand, the reluctance on the part of the tenant to quit a home and the only profession that he is capable of, lead him to submit to demands on the part of the landlord, which do not leave him a fair remuneration for his time and trouble?—I know numerous instances of tenants adhering to the soil on which probably they were born, without the slightest knowledge of the real rent which they ought to pay, and there remaining with the fall of prices, until their whole property has been destroyed and lost."—E. Wakefield, Report 1821, p. 216.

Farm maintenance neglected.—In all periods of deflation there is so little left after the payment of interest and taxes, and payment for purchased goods that it is impossible to keep up the farms.

"Do you consider that the production per acre throughout the country in general, has lessened or increased from what it was some years ago?—I believe there are as many acres under cultivation now as there were three years ago; but that the produce per acre is very deficient, in consequence of the want of proper tillage and manure of that land."—John Ellman, farmer and agent, Report 1821, p. 51.

"The farmer is not able to lay out money upon his farm as he was?—Certainly not."—James Tillyer, farmer, First Report 1836, p. 195.

"What has been the general consequence of this indisposition: has the value of the farm-buildings deteriorated in the last ten years, or not?—In consequence of their not being able to pay their rent, they are not able to expend money in the repairs; and deterioration has been the consequence."—Wm. Dawnes, Report 1833, p. 77.

Effect on rural merchants.—In every period of deflation many farmers of provident character and industrious habits find it impossible to pay their bills promptly. Country merchants in the West will understand how to sympathize with those of England

a century ago. Then as now the merchants rejoiced when prices fell, but later spent sleepless nights about it.

“Have you any knowledge, whether there is any distress among the tradesmen in your country, from the nonpayment of bills?—The bills are very badly paid.”—Report 1821, p. 72.

“You say that you sell less oil-cake, and less rape-dust, do you get as well paid for that as you used to do?—No, that has caused me many unhappy moments; I believe at this moment my book debts with the farmers are not worth ten shillings in the pound; there are two farmers in the Cambridge gaol at this moment, and I dare scarcely open a letter, knowing the state of the farmers, fearing that it may contain notice of some bad debt or other.

“Are those men who are verging on insolvency, men of prudent character and industrious habits?—I am speaking only of that class of men; I would not trouble the Committee with any other.”—William Thurnall, maltster, miller, oil crusher, general corn merchant and farmer, First Report 1836, p. 119.

“Do the tradesmen in the provincial towns rejoice very much when they hear of a fall in the price of corn?—No, the tradesmen rejoiced at it at one time; but they have found their error now.”—First Report 1836, p. 85.

The city point of view.—The city dweller is well content to obtain his day's food supply with fewer hours of labor. The man who lives on interest payments is likewise pleased with falling prices and cheap food. Mr. Pattison, Esq., entertained the opinion that the distress was exaggerated because a city friend of his told him he thought it was.

“You are not acquainted with the price of agricultural articles?—I know little about agricultural articles. I had entertained an opinion that the cry of distress was exaggerated. This opinion was somewhat confirmed some months ago by a gentleman living in the centre of an agricultural district, who expressed the same doubts.

“Was he a considerable land-owner?—No; he was a country banker. He stated that distress, in his opinion, was exaggerated, and arose from various causes, and not entirely to be attributed to the distress of the farmer, caused by low prices.

“In what county did he live?—In Oxfordshire.

“You understood from him the farmers were there in a very

flourishing condition?—He did not consider that there was so much distress among them as represented.”—James Pattison, Esq., Member of House of Commons, House of Lords Report 1837, p. 332.

Inflation and deflation are a money question.—Expansion and contraction of the currency produce violent fluctuations in prices of articles bought and sold by farmers, and become a subject of intense controversy.

“Regarding the question of currency, I have brought with me a chart framed by a friend of mine, Mr. Tertius Galton, of Birmingham, showing the rise in the prices of gold and corn, and the increase of bank notes relatively, from the year 1760 to the year 1815; and I believe it will be found a very curious document, and they seem all to have kept pace together.”

“Fluctuations of price, whether they arise from alterations in the value of money, or from changes of the corn laws, cannot fail to produce evils in every branch of rural economy, which, independently of these distributing causes, must ever remain exposed to grievous vicissitudes, from the uncertainty of seasons. These artificial fluctuations, however, only aggravate the natural evil; they render the income of the landlord precarious, the fixed rent of the farmer a hazardous speculation, and the wages of the labourer an uncertain remuneration.”—Report 1833.

“Then are you of opinion, that one of the greatest evils to which the country has been exposed, is that want of some fixed standard by which to regulate the value of its currency. . . .

“Then supposing the want of it, does it follow that it tends to derange the security of all property?—There can be no doubt about it; and to create a change of property.”—E. Wakefield, Report 1821, p. 214.

“It is impossible to overlook, and it would be criminal to disguise, the fact, that the depreciation and restoration of the value of money, consequent on the Bank restriction of 1797, have unsettled the habits, disturbed the fixed engagements, and injured alternately the interests of large classes of the community.”—Report 1833.

“Is it your opinion that it would not have been better to have returned to a gold currency, because it lowered prices so much?—I think we returned too quickly, that was my opinion at the time.

"You think that the fall in prices is to be attributed to the alteration of the currency?—Yes, I think it would have been better to have taken a longer period."—John Houghton, farmer and receiver of rents, First Report 1836, p. 47.

"To what do you attribute that great loss?—I have been of opinion that it is the contraction of the currency.

"You stated that you think the contraction of the currency to be one main cause of fall in the price of agricultural produce?—Of agricultural and all other.

"Will you state why you think so?—I can only state in a general way that I have observed, that when there has been a contraction of the currency prices have fallen; and when there has been an expansion they have generally risen. . . .

"Can you at all ascertain from experience how the diminution of money operates upon the state of the farmer?—In this way, that if there is less money to purchase goods, goods must meet the level of the diminished quantity of money."—Wm. Thurnall, maltster, miller, oil crusher, and general merchant, First Report 1836, pp. 115, 127.

Remedies.—Relief from the tax burden is always proposed in a period of financial deflation.

"Can you suggest any mode by which the Legislature could assist the farmer?—I consider that the Legislature could assist us by taking off our local burdens and placing them on property generally; I think that the poor rates ought to be borne by the property of the kingdom at large. Include in that the county rate, the constables rate, statute duty on roads, and every burden of that sort."—First Report 1836, p. 65.

Tariff always becomes a political issue when inflation or deflation occurs. Mr. Thomas Tooke, a business man, proposed that the tariff on farm products should be reduced.

"You have stated your opinion of the present corn law, as it regards the interest of the farmer and the landlord; what is your opinion of its effect on the interests of the public at large?—I conceive, that without being beneficial to the farmer or the landlord, it is highly injurious to all other branches of the community, by disturbing the proper application of capital and industry; by keeping a considerable part of our manufactures on hand which would be exported, if the foreign consumer had the means of paying for them in his corn. There appears to me to be at this moment,

a quantity of corn on one side of an impenetrable barrier, and a quantity of manufactures on the other, which would naturally be interchanged, if it were not for the artificial hindrance occasioned by the present system.”—Thomas Tooke, Report 1821, p. 230.

“Is not the price of labour, in your opinion, in this country, raised by the higher price of commodities, besides corn, which are protected by duties and are necessary to the labourer?—Our system of duties, partly from taxation and partly from our protective regulations, does make the money price of the necessaries of life higher, and consequently does so far affect the nominal price of labour.”—Thomas Tooke, Report 1821, p. 288.

The city man’s remedy was to remove the tariff so that more farm products could be imported. Mr. Stickney, the farmer, proposed to buy the surplus farm products and store them or dump them on the foreign market, similar to the proposed export corporation bill.

“Desperate cases require desperate remedies; I can see no immediate remedy for our case, which is, indeed, desperate, but for the government to immediately buy up a considerable part of the surplus of grain, at present before the market, and store it until the consumption calls for it at better prices; or what would be still better, send it to our colonies or elsewhere.”—Wm. Stickney, farmer, Report 1821, p. 156.

The Committee of the House of Lords decided that nothing could be done and reported as given below. They were right, nothing can be done to be of material help to agriculture so long as deflation continues.

“By *The Lords Committee* appointed a Select Committee to inquire into the *State of Agriculture* and into the *Causes and Extent* of the Distress which still presses upon some Branches thereof, and to report their Observations and Opinions thereupon to *The House*; and to whom was given to report from time to time to *The House*; and to whom were referred certain Petitions and Papers relating to matters under the Consideration of the Committee:

“*Ordered to Report,*

“That the Committee have met in pursuance of your Lordship’s Order of Reference and have examined a great number of Witnesses and collected a great many very important Documents relating to the extent and causes of Agricultural Distress: but they

have not agreed on any Report on such Evidence to be submitted to your Lordships.”—Report from the Select Committee of the House of Lords appointed to inquire into the State of Agriculture in England and Wales. Parliamentary Papers, Session 1837, Vol. 5, p. iii.

CHAPTER XXV

PROBABLE FUTURE PRICES

World price level.—In most countries, gold prices in 1924 were from 30 to 50 per cent above the pre-war level. Gold was therefore cheap, being from two-thirds to three-quarters of its pre-war value. Only a few other commodities were as cheap as this. The American price of wheat in 1923 was so low as to be disastrous to American farmers, but in December, 1923, a bushel of wheat would buy 7 per cent more gold than before the war.

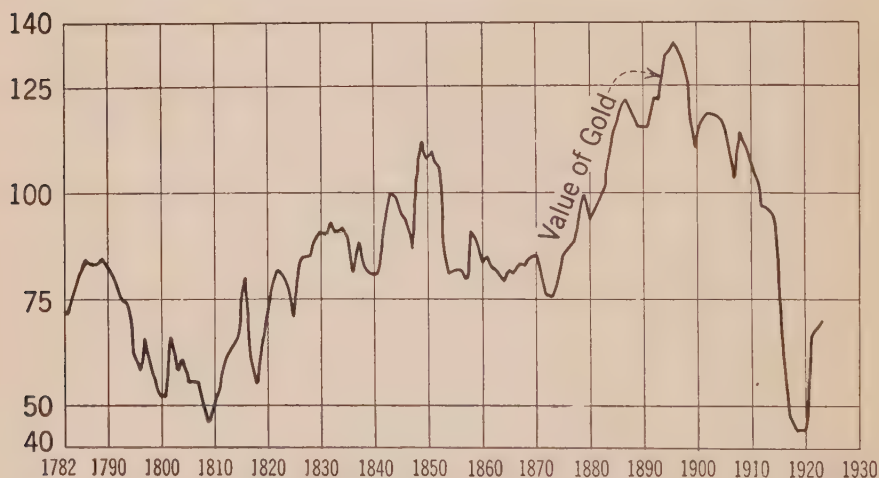


FIG. 99.—Value of gold in England. During each war period, gold was very cheap. Following each war, it rose in value.

The value of gold.—Since gold is used as money it is difficult to realize that its value changes, for is not a gold dollar always worth a dollar? A gold dollar is merely 23.22 grains of pure gold. Of course, 23.22 grains of gold is always worth 23.22 grains of gold, just as an ounce of iron is worth an ounce of iron. It is only by comparing with other things that we can tell what anything is worth. When it is found at a given time that an ounce of iron

will generally exchange for a larger quantity of other things than formerly, it is certain that iron is becoming more valuable. If it is found that an ounce of gold will exchange for a greater quantity of other things than formerly, it is evident that gold is becoming more valuable.

Index numbers of prices of many things in terms of gold show whether gold is changing in value. If prices expressed in gold have doubled it means that an ounce of gold will exchange for half as great a quantity of other things as it would formerly buy, or gold has declined one-half. If prices fall, it means that gold is becoming more valuable. The changes in the quantities of other things that a given quantity of gold would buy, or the value of gold are shown in Fig. 99.

During the Napoleonic Wars gold ceased to be used as currency in many countries. The lessened demand for it made it so cheap that a given quantity of gold would exchange for only about two-thirds of the amount of general commodities that it would have exchanged for before these wars. Stated in another way, prices were not merely high when expressed in terms of paper money, but were high in terms of gold. It is probable that gold mining was checked.

Following the wars, one country after another returned to the gold basis and the demand for gold made it more valuable. This undoubtedly led to an increased search for gold. The rush to California in 1849 and to other mining regions was a response to the high value of gold.

From 1864 to 1879 the United States ceased to use gold as currency. This lessened demand affected the world value of gold. The quantity of goods that a given quantity of gold would buy in England declined until 1873. During this period there was less interest in gold mining than there was in 1849.

When the United States came back to a gold basis it returned not only with its former demand for gold, but with a greatly increased demand due to the growth of the country. Gold rose in value with great rapidity. The injustice which this brought to taxpayers and debtors led to the populist movement, and to the free-silver campaign. In 1896 the index number for the value of gold was 135. This was the highest value of gold for 142 years. It rose from 72 in 1782 to 135 in 1896. The exceedingly high value of gold led to a world wide search for it. Cripple Creek,

the Klondyke, and South Africa were the centers of interest. Gold mining stocks were the popular form of speculation, just as oil stocks have been the chief interest during the past few years.

The steadily falling value of gold from 1896 to 1913 led to agitation in all the large cities of the world concerning the high cost of living, and led to discontent on the part of persons who derived their incomes from interest. Yet the change in the seventeen years from 1896 to 1913 was just equal to the rise in the value of gold that took place in the fifteen years from 1881 to 1896, and much less than the rise that occurred from 1873 to 1896. The change in value from an index of 97 in 1881 to 135 in 1896, made farmers discontented. This was smiled at by many city persons as due to the vagaries of rural folks. The change from 135 to 97 was the period of the H. C. L., which was looked upon as a real problem by city persons, but was very satisfactory to farmers.

During the World War period, gold was so little used as currency that the small demand for it made it very cheap. The United States remained on a gold basis and became the only large market that would pay a high price for gold, hence gold moved from all over the world to America. Gold became so cheap in England that to buy a given quantity of a variety of commodities at wholesale prices required over twice as much gold as before the war. After 1920 the value of gold rose rapidly, but, as an average for 1923, its value was only 70 per cent of its five-year pre-war average.

Prices of different commodities are always fluctuating, but generally they are fluctuating about the same base level. Only when there is a striking and permanent decrease in demand, or a permanent increase in supply due to discoveries or new methods of production, is a commodity likely to become permanently cheaper than formerly with respect to other commodities. For example, wheat was very cheap in 1923, and brick was very high. There was no reason for supposing that brick would remain so high permanently, or that wheat could continue to be so cheap.

Figure 99 shows the value of gold in terms of commodities in England for over a century. As long as the gold standard is used, cheap gold means high prices. If gold becomes half as valuable as formerly, prices are doubled. During the Napoleonic Wars, Civil War, and World War, gold became cheap. Following each of the previous wars it rose in value for many years.

Concentration of gold due to World War.—In 1922 the world gold reserves were 89 per cent above the 1913 level (Table CXLVII). Gold which had previously been used as ornaments, and gold which had been in circulation was concentrated in banks.

As the countries go back to a gold basis, some of the gold will go back into circulation. As the people become more prosperous, increasing amounts will doubtless again be used as ornaments. It is to be expected, however, that the amount left in banks will remain higher than before the war. A gold certificate in circulation is the same as gold itself, since gold equal to the full value of the certificate is stored so long as the certificate is in circulation. In

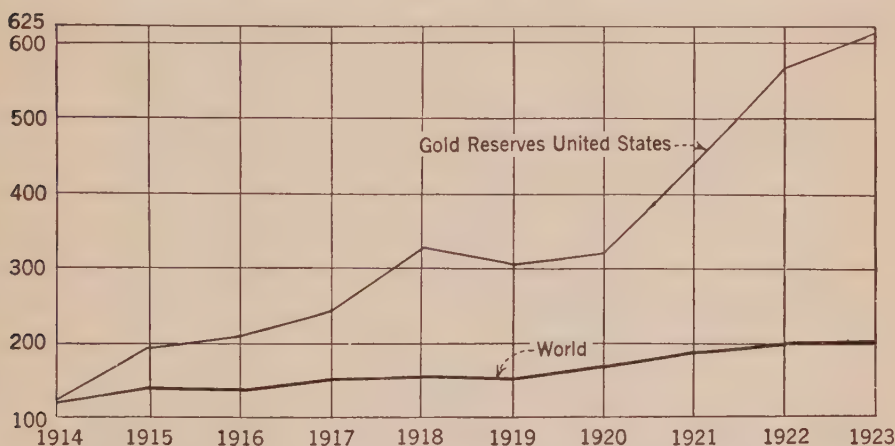


FIG. 100.—Gold reserves in the United States and in the world. World gold reserves in 1923 were double the pre-war amount, and in the United States they were increased six times.

the United States large numbers of the certificates have been put into circulation in the past few years.

Some persons believe that European countries will not return to the gold basis for many years, if they ever do. It seems more probable that they will all attempt to get back to a gold basis as rapidly as possible.

Increased efficiency in the use of gold.—The more efficient use of the present gold supply in part offsets the tendency to reduce gold production and the increased demand for gold. There is a growing tendency for gold to be kept in the central banks. Since all countries use paper money to some extent and issue more paper money than there is gold, a dollar or a franc in

TABLE CXLVII

GOLD PRODUCTION AND GOLD RESERVES

1913 = 100

Year	World Gold Production *	United States Gold Production †	World Gold Reserves ‡	United States Gold Reserves ‡
1913	100	100	100	100
1914	96	102	118	120
1915	102	110	140	190
1916	103	102	138	208
1917	92	91	151	251
1918	83	76	152	325
1919	79	64	150	303
1920	74	55	165	321
1921	70	54	186	440
1922	68	53	198	568
1923	.....	.....	202	614

* Half a Century of Business, Babson's Business Barometers.

† Dunlop, J. P., Gold and Silver in 1922. United States Geological Survey, p. 625, 1924.

‡ The Gold and Silver Situation. Federal Reserve Bulletin, Vol. VIII, No. 6, pp. 659-666, June, 1922.

the bank becomes the basis for more than a dollar or franc in actual circulation. The steady increase in the use of checks, and the transfer of credit rather than money makes a dollar or franc in currency do more business than formerly.

More money needed.—At the same time that gold production is being checked, the physical volume of business is rapidly increasing. Not only is the volume of business increasing but business is becoming more commercialized. When a farmer kills his own pig and eats it,—no money is involved. If he sells the hog and buys back meat, money is called for. With the steady specialization in business, more money transactions take place. At the same time the number of wholesalers, jobbers, and retailers multiplies so that the number of transactions is further increased. All this calls for a steady increase in the quantity of money, or prices will fall.

Gold production.—The lessened demand for gold makes it cheap. When gold is very cheap, the search for it is checked. In 1923, the prospector would have to find almost twice as much

gold as before the war to buy himself a pair of shoes or a blanket. The world is being searched for oil, but comparatively little prospecting is being done for gold.

It is possible that new processes for the extraction of gold will be invented, or that new mines will be found. Either of these might result in cheap gold. However, it is not likely that persons who are hunting for oil will find gold, or that chemists who are attempting to produce more gasoline from a gallon of crude oil will discover a cheap method of extracting gold. Discoveries and

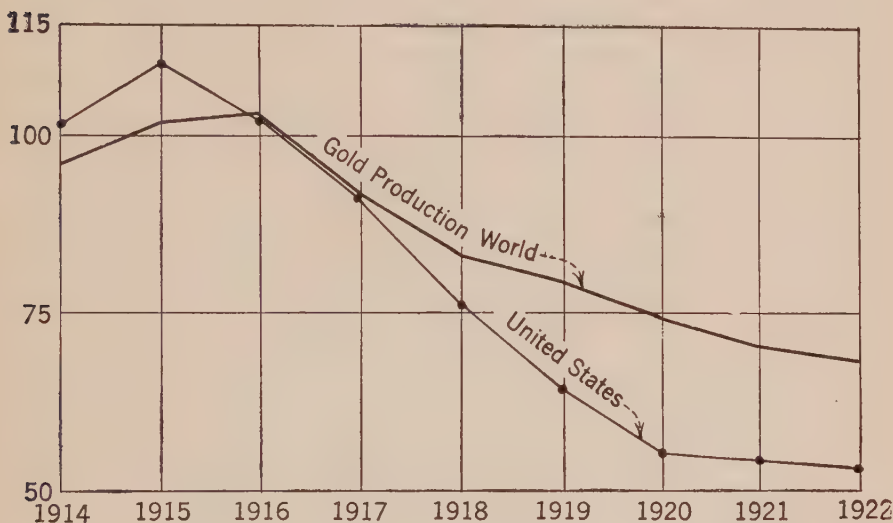


FIG. 101.—Gold production in the United States and in the world. In 1923, the gold production of the world was two-thirds the pre-war amount; in the United States, it was half of the pre-war.

improved methods usually, although not always, occur when the product is in especial demand.

The world production of gold in 1922 was 68 per cent of pre-war (Table CXLVII). Gold production in the United States fell even more strikingly. In 1922 it was only 53 per cent of the 1913 amount.

Increased use of gold for other things than money.—When prices of commodities are high, gold is cheap and greater quantities are used in the arts. Like any other commodity, gold is used more freely when it is cheap.

When wheat, or gold, or hogs, are very cheap relative to other

things, the assumption is that they will eventually come into adjustment again. In fact, the check on production may cause a swing to the other extreme for a time, and the low-priced products may be high. Apparently this happened with gold in the generation following the Napoleonic Wars and again after the Civil War. The difference is that if wheat is out of adjustment with other things, its price is likely to come to the price of other things; but if gold is out of joint, our monetary expression of other things comes to gold.

Summary.—Apparently the only things that can make gold continue to be so cheap are increased supply or decreased demand. Apparently the production of gold may be expected to decline, unless its price rises, or unless by accident new mines or processes are discovered. Since little effort is being expended for this purpose, the chances of such discoveries in the next twenty years seem slight. Temporarily the monetary supply of gold is exceedingly high, because so few countries are using any of it as money, and because so much of the available supply has accumulated in banks. Probably the supply in banks will decline somewhat. It, therefore, appears that the only way to maintain the price level above the pre-war basis (that is, keep gold cheap) for the next twenty years is to have an ounce of gold support more currency than formerly. It may be possible to do this by keeping the gold in the central banks and using bank notes as currency.

Summarizing all the above facts the writers believe that the world value of gold will gradually rise, that is, prices expressed in gold will gradually fall; and that prices will approach the pre-war level at some time in the next ten to twenty years.

Prices in the United States.—The gold reserves in 1923 in the United States were six times the pre-war amount. If the world were on this basis, a high price level would be expected. The countries from which our gold came, are anxious to regain it. Prices in the United States on a gold basis are higher than prices in other countries. This makes the United States a good place in which to sell and a poor place from which to buy. It stimulates imports and checks exports. If the European countries should pay any considerable amount of their war debts to the United States, the payment would tend to keep the gold here. However, it is to be expected that our imports will continue to increase, that our investments in foreign countries will grow, and that before

many years a portion of our gold supply will begin to move to Europe.

It may be said that, since the United States has five times as much gold as before the war, prices in the United States will remain high. On the other hand, it may be said that the United States has this enormous supply of gold, yet prices are only 50 per cent above pre-war.

Some persons believe that with the federal reserve system prices will be maintained at a high level. It may be recalled that this argument was used in 1919, and that with the federal reserve

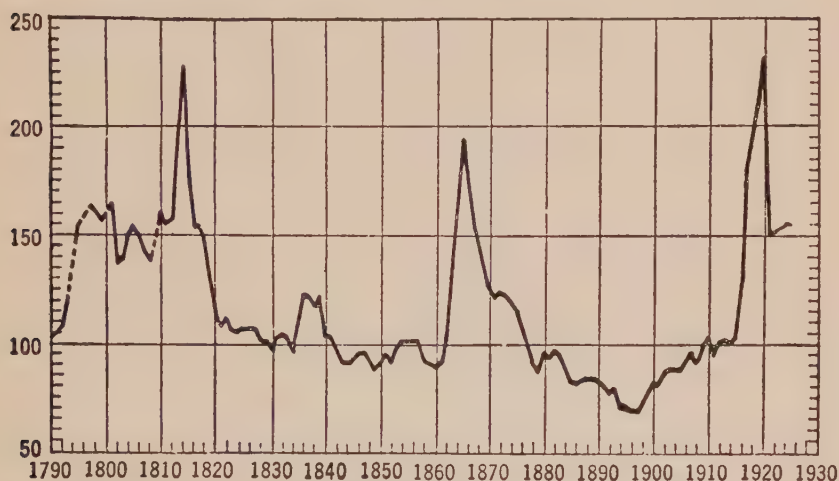


FIG. 102.—Wholesale prices in the United States for 132 years (1910 to 1914=100). Prices rose very high at each of the war periods. After each war, there was a precipitous drop. After the War of 1812 and after the Civil War, the general tendency was downward for a number of years.

system there occurred the most violent drop in prices of which we have a statistical record in America. A few of the more important points to consider in forecasting the general price level are listed below:

Summarizing these influences the writers believe that wholesale prices in the United States will continue to follow a very erratic course, but that the general tendency will be down, and that prices will approach the pre-war level sometime in the next ten to twenty years. However, it should be noted that many competent students do not expect prices to decline much below the level of 1924.

Forces Tending to Cause Prices in the United States to Return to the Pre-War Level	Forces Tending to Cause Prices to Remain higher than Pre-War
<ol style="list-style-type: none"> 1. Tendency of every commodity to return to its previous relationship to other commodities, unless there are permanent changes in demand or in ease of production. 2. Decreased mining of gold. 3. Increased volume of business. 4. Increased use of gold for purposes other than money, because gold is cheap. 5. Tendency for gold to go back into actual circulation, a process that is being fostered in the United States at the present time. 6. The probability that much of the gold that came from other countries during the war period will return to those countries. 	<ol style="list-style-type: none"> 1. Increase in efficiency in the use of gold as money, making one dollar do more business in a year. 2. Probable tendency for a larger portion of the gold supply to remain in central banks. 3. Possible discoveries of new gold mines, or new methods of working low-grade mines and ores, or increased production of gold as a by-product of other mining. 4. The possibility that the accumulated gold may be kept in this country.

Agricultural prices.—During a period of deflation, agriculture suffers worse than other industries because of the long-time investment, heavy taxes, and other delays in adjustment. City industries are able to adjust by having successive periods of activity at fair profit interspersed with periods when the business is closed. Normally the prices of farm products as paid to farmers will be below the general price level most of the time during a period of deflation. In years of crop failure agricultural prices may be high, and an individual commodity may at any time be high.

Prices of individual farm products always fluctuating.—There is never a time when every individual farm product is lower than the general price level. Prices of individual farm products move in irregular waves about the average agricultural price level. Occasionally an individual commodity is adjusted to a new basis, but after the adjustment is made it continues to swing about the average of farm prices. Agriculture is such an old industry and is so highly developed, that the instances of decided change are less frequent than in the young and less standardized city industries. At the date this book was written (July, 1924) hogs, horses, and beef cattle were lower in price than most farm products. Butter, cotton, wool, and lumber were relatively high in price. It is to be expected that these relationships will be temporary. The

TABLE CXLVIII

WHOLESALE PRICES AND VALUE OF GOLD IN ENGLAND

1910-14 = 100

Year	Prices in Cur- rency	Prices in Gold	Value of Gold	Year	Prices in Cur- rency	Prices in Gold	Value of Gold	Year	Prices in Cur- rency	Prices in Gold	Value of Gold	Year	Prices in Cur- rency	Prices in Gold	Value of Gold
1782	138	138	72	1818	187	182	55	1854	123	123	81	1890	87	87	115
1783	138	138	72	1819	162	154	65	1855	122	122	82	1891	87	87	115
1784	128	128	78	1820	146	142	70	1856	122	122	82	1892	82	82	122
1785	124	124	81	1821	128	128	78	1857	127	127	79	1893	82	82	122
1786	117	117	85	1822	122	122	82	1858	110	110	91	1894	76	76	132
1787	121	121	83	1823	124	124	81	1859	114	114	88	1895	75	75	133
1788	121	121	83	1824	128	128	78	1860	120	120	83	1896	74	74	135
1789	117	117	85	1825	141	141	71	1861	118	118	85	1897	75	75	133
1790	121	121	83	1826	121	121	83	1862	122	122	82	1898	78	78	128
1791	123	123	81	1827	117	117	85	1863	124	124	81	1899	82	82	122
1792	128	128	78	1828	117	117	85	1864	127	127	79	1900	91	91	110
1793	136	136	74	1829	112	112	89	1865	122	122	82	1901	85	85	118
1794	135	135	74	1830	110	110	91	1866	123	123	81	1902	84	84	119
1795	162	162	62	1831	111	111	90	1867	121	121	83	1903	84	84	119
1796	173	173	58	1832	107	107	93	1868	120	120	83	1904	85	85	118
1797	152	152	66	1833	110	110	91	1869	118	118	85	1905	87	87	115
1798	163	163	61	1834	109	109	92	1870	116	116	86	1906	93	93	108
1799	180	180	56	1835	111	111	90	1871	121	121	83	1907	97	97	103
1800	194	194	52	1836	123	123	81	1872	132	132	76	1908	88	88	114
1801	211	193	52	1837	114	114	88	1873	134	134	75	1909	90	90	111
1802	164	152	66	1838	120	120	83	1874	123	123	81	1910	94	94	106
1803	178	173	58	1839	124	124	81	1875	116	116	86	1911	97	97	103
1804	169	164	61	1840	124	124	81	1876	115	115	87	1912	103	103	97
1805	188	182	55	1841	122	122	82	1877	114	114	88	1913	103	103	97
1806	184	180	56	1842	110	110	91	1878	105	105	95	1914	103	106	94
1807	182	178	56	1843	100	100	100	1879	101	101	99	1915	131	128	78
1808	207	200	50	1844	101	101	99	1880	107	107	93	1916	165	162	62
1809	222	216	46	1845	105	105	95	1881	103	103	97	1917	212	208	48
1810	227	196	51	1846	107	107	93	1882	101	101	99	1918	233	228	44
1811	203	188	53	1847	115	115	87	1883	99	99	101	1919	249	227	44
1812	204	167	60	1848	94	94	106	1884	92	92	109	1920	304	228	44
1813	207	159	63	1849	89	89	112	1885	87	87	115	1921	188	149	67
1814	211	157	64	1850	93	93	108	1886	84	84	119	1922	159	145	69
1815	182	150	67	1851	91	91	110	1887	82	82	122	1923	156	143	70
1816	151	125	80	1852	94	94	106	1888	85	85	118				
1817	165	162	62	1853	115	115	87	1889	87	87	115				

Prices from 1782-1820, Jevons, W. S. On the variation of prices of the currency since 1782. Jour. Royal Stat. Soc., Vol. 28, pp. 314-15. June, 1865.

1821-1845, Sauerbeck, Augustus. Prices of commodities and the precious metals. Jour. Stat. Soc., Vol. 49, p. 634. September, 1886.

1846-1885, Sauerbeck, Augustus. Prices of commodities and the precious metals. Jour. Royal Stat. Soc., Vol. 49, p. 648. September, 1886.

1886-1920, Editor of the Statist. Wholesale prices of commodities in 1920. Jour. Royal Stat. Soc., Vol. 84, part 2, p. 260. March, 1921.

From 1801 to 1820, England was not on a gold basis. The value of gold is calculated from Jevon's index numbers of prices in gold. England was not on a gold basis during the World War and following it. Wholesale prices in England in currency were converted to a gold basis by multiplying by exchange rates in dollars. The value of gold is the reciprocal of prices expressed in gold.

real problem for the farmer, however, is not the swings in price of individual farm products, but the problem of what the general

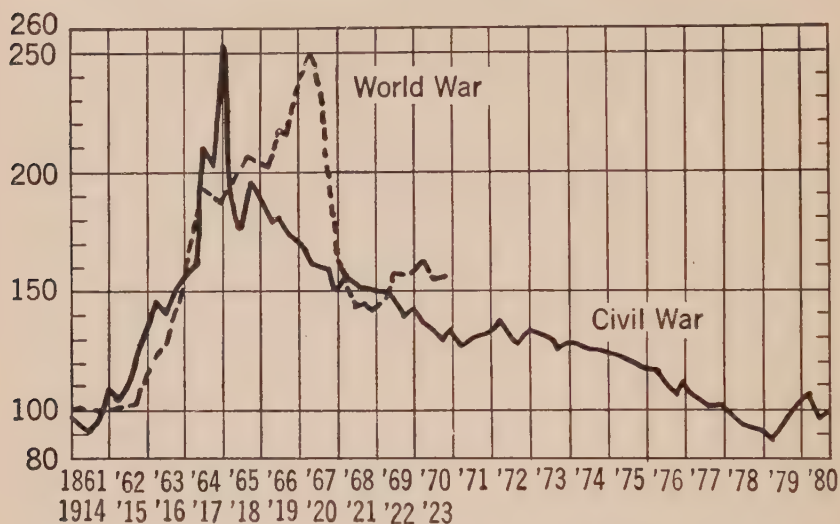


FIG. 103.—Wholesale prices during the Civil War and World War periods (for the Civil War, 1856 to 1860=100; and for the World War, 1910 to 1914=100). Following the World War, prices did not fall so soon as after the Civil War, but they fell more precipitously and fell farther. There is considerable similarity between the price movements of the Civil War and World War periods. The writers expect this similarity to continue.

price level will be, for on this depends the long-time relation of his income to taxes, debts, and commodities that he must buy.

CHAPTER XXVI

EFFECTS OF THE AGRICULTURAL DEPRESSION

Effects on the individual vs. effects on industry.—The effects of an agricultural depression are more severe on the individual than on the industry. When a man loses his property, or makes a private settlement with his creditors, the property is still there. Probably it is somewhat neglected, and production will usually be somewhat affected. For the industry, a partial loss is sustained, but the individual may lose his life-time savings. What is often for the individual a life-time tragedy may have a relatively small effect on production. This is one reason for the failure of city persons to understand that an agricultural depression exists. Since agricultural production continues they do not believe that there is any real trouble. The writers constantly receive many honest inquiries from city persons as to whether there is in fact anything the matter.

Effects on farmers.—Most farmers are married men. The majority of the new buyers of land were men with families who, as a result of many years of work and economy, had saved enough money to make a small payment on a farm. For large numbers of these, the loss means that the hope of farm ownership is gone. When a man has a growing family, it is difficult for him to begin with nothing and save enough money to make a part payment on a farm. Those who are successful in buying farms usually save a little money before they start farming and save considerably more before the children become a financial problem. It is very difficult for a tenant or owner who loses his farm to start again as a hired man and save much money out of farm wages while supporting a family.

A tenant or owner who loses his farm and goes to town is handicapped as compared with a young man who goes to town before he has a family to support. To lose all of one's property and at the same time change his occupation and support a family is a serious undertaking.

A typical case of a tenant is given in a letter to the Secretary

of Agriculture. "Our neighbor joining us on the east, a hard-working man, had rented 320 acres of land. He and his wife and one hired man farmed it. They had about 100 head of cattle and about the same number of hogs. The 1st of December they turned everything over to the landlord, save one team, which they hitched to an old wagon, put in their household goods, got in the wagon themselves, and drove away to town to get work at day labor and make a new start in life."

The shock from losing one's life-time savings because the value of the property has shrunk to less than the mortgage is so great that many individuals who might otherwise once more get started, hesitate to again risk their small accumulations by making a part payment on a farm.

Many farm children who would otherwise go to high school or college find it impossible to do so, since they must help on the farm. Other children discontinue school at an earlier age than would otherwise be the case. For these individuals, the loss is irreparable. The standard of living of many farmers is reduced to a point far below the standards necessary for health and happiness. Savings are made on doctor's bills, on dentist services, on nurses, and on food and clothing.

Many farmers profit by the depression.—When the agricultural depression is over, the land and other property will again become valuable. Persons who are fortunate enough to acquire such property shortly before the improvement occurs will profit greatly. Some farmers who are not in debt are able to buy the innumerable bargains at the farm auctions of their bankrupt neighbors, and may buy additional farms at such low prices that good profits are made. Some persons who have sold farms take the property back for the face of the mortgage, which is often much less than the property will be worth.

Effects on agriculture.—The effects on agriculture and on the nation are diffused over many years and are so obscured by other factors that the cause is not often realized. One of the very serious results is the disrepute into which agriculture falls. For a time it ceases to become attractive to educated, upstanding men. Since farm families are larger than city families it is important that the farm population shall not deteriorate.

Movement away from farms.—During a period of agricultural depression, many young men leave farms. The older men who

have investments remain as long as they have any hope of saving their equities. As a result, a period of agricultural depression leaves agriculture with a serious shortage of young men. When the depression is over, the principal means of making up the shortage is by keeping a larger percentage of the young men on the farms. This sort of adjustment is very slow. It was many years after 1897 before the shortage of young men was made up. The disrepute into which the industry fell was so great that a number of years of prosperity was required before it was generally believed that agriculture was a worth-while occupation. It required additional years to retain enough young men to make up the shortage. It was during this period that the great movement for agricultural education swept the country. This movement is now seriously checked.

A letter from a farmer describing his status illustrates this lack of young men. "We are certainly up against a hard proposition. The decline of the country church is caused by the inability of the farmer to pay the preacher a living salary. The farmer must go without the new suit of clothes that he needs. His horses are growing old, his machinery wearing out, and in this section the farmer himself is past the prime of life. I was driving four horses on the drag the other day, my age was sixty-seven and the horses were over eighty making a total of 150 years. It looked as though we would need younger horses and driver before long. I thought of other farmers that I knew and perhaps two-thirds of them were more than fifty years old."

Deterioration of farm machinery.—The number of farm machines sold in 1921 was about one-third of the number sold in 1920. A slight increase in sales occurred in 1922.

It is probable that the sales in 1920 were high enough to increase the equipment, but it is certain that the present sales are too low to maintain the equipment. When the agricultural depression is over, the buildings, fences, and equipment on farms will be in very bad condition. Farm equipment was improved in 1919-1920 at a time when railroad equipment was deteriorating. Now railroads and city buildings are using large sums of money, and farm equipment is rapidly deteriorating.

Even if the depression continues, the sales of farm equipment must increase gradually, for the farmers cannot go on indefinitely using the old tools. Sales will sometime have to be very high

to replace not only the usual demands but also the deficiency. The shortage is so great that farmers will buy whenever they get any money. Normal purchases for a single year will not indicate normal prosperity or that the shortage is made up.

TABLE CXLIX
NUMBER OF FARM MACHINES SOLD IN THE UNITED STATES
From Reports by the Bureau of the Census

	1920	1921	1922
Plows and listers.....	1,216,000	408,000	456,000
Cultivators.....	590,000	368,000	306,000
Two row corn planters.....	66,000	26,000	21,000
Cotton and cotton-corn planters.....	140,000	29,000	24,000
Grain drills.....	110,000	23,000	22,000
Mowers.....	173,000	63,000	93,000
Grain binders.....	100,000	28,000	39,000
Grain threshers.....	21,000	9,000	10,000
Tractors (gas).....	163,000	.....	101,000
Farm wagons.....	298,000	.....	113,000
Lime spreaders.....	9,000	3,000	3,000
Manure spreaders.....	104,000	27,000	33,000

In April, 1924, farm machinery cost 86 per cent more than in 1913. A price of 86 per cent above pre-war is not excessive when considered in terms of city labor, but is almost prohibitive to most farmers. At the average farm prices, to buy ten typical farm machines in the spring of 1924 required 72 per cent more bushels of wheat than were required before the war, 48 per cent more bushels of corn, 17 per cent more pounds of butter, 75 per cent more pounds of beef cattle, or over twice as many pounds of hogs.

The amount of farm products that farmers exchanged for machinery in 1921-24 was considerably below the pre-war amount, but the amount of machinery that the farm products bought was even lower. When it is remembered that about double the pre-war amount of farm products went for taxes and interest payments it was surprising that so much was left to exchange for machinery.

Farm maintenance and development.—Comparatively little fencing and other improvements are made on farms in a period of depression. The improvements are often allowed to get seriously out of repair. Even more serious, though less visible, is the neglect

TABLE CL

INDEX NUMBERS OF DEALERS' PRICES IN APRIL FOR TEN STANDARD FARM IMPLEMENTS *

1913 = 100

Year	Index Numbers	Year	Index Numbers	Year	Index Numbers	Year	Index Numbers
1913	100	1916	108	1919	178	1922	153
1914	102	1917	134	1920	175	1923	165
1915	102	1918	175	1921	176	1924	186

* Agricultural Crisis and Its Causes. Report of Joint Commission of Agricultural Inquiry, Sixty-seventh Congress, Report 408, Part I, p. 189, 1921. Later data furnished through courtesy of Mr. A. E. McKinstrey of the International Harvester Company.

of the soil itself. Weed control is neglected, fertilizers are less used, and the innumerable attentions that are necessary to keep a farm in good condition are often neglected.

The clearing of land, drainage, irrigation, and other reclamation work is largely stopped by a period of agricultural depression. The gradual development which should have taken place comes later by exploitive methods that are very expensive.

Deterioration of livestock.—A period of prosperity gives a great stimulus to the improvement of livestock. A period of depression checks this improvement. During the Civil War period, record prices were paid for superior short-horn cattle, and efforts were expended in improving them. During the World War period, the improvement of dairy cattle was stimulated. Cattle sold at record prices, and great breeding establishments spared no effort in the improvement of animals. One of the best means of determining which were the best animals was by advanced registry testing. Cows were milked under official supervision and the weight and analysis of the milk taken. Such tests were made for thousands of animals. The superior cows were thus found and often assembled in herds in which the best bulls were kept.

The amount of advanced registry testing during the depression was less than half as great as before. Many herds that were internationally famous were dispersed at public auction, so that the superior blood lines that had been established were dispersed. The achievements have been largely lost because of breeding with inferior animals in widely scattered herds.

Some persons have thought that the stallion registration figures show improvement because the percentage of pure-breds is greater than it was during the period of prosperity. However, this increase is not a sign of improvement. It means that substantially all the grade stallions have gone out of use, and a large number of pure-bred horses have disappeared, and the country is short of pure-breds as well as of grades.

Effects on farm efficiency.—A period when food is very cheap compared with wages results in drastic steps in the saving of labor on farms and elsewhere. Such a period results in the introduction of many labor-saving methods that will remain after the depression is over. Such violent disturbances challenge all the accepted methods of procedure. Of the infinite variety of things that are tried some prove useful and remain as a permanent benefit. The ingenious ways in which farmers have reduced the labor requirements in crop and animal production during the agricultural depression have been phenomenal.

Changes in demand.—When there is full employment at high wages and food is cheap, very abnormal demands develop. Since food takes a smaller percentage of the income than formerly, more money is available for other things. The choicer grades of food sell for high prices while poorer grades may be almost unsalable. This stimulates the production of choicer foods such as oranges, lettuce, eggs, and butter. Abnormal demand results in abnormal production, both of which have to be corrected later. The Institute of American Meat Packers reports that in September, 1923, wholesale prices of pork loins in Chicago were 60 per cent above pre-war, sides were 20 per cent below pre war; carcass beef from prime native steers was 35 per cent above pre-war; that from medium steers 13 per cent above; and that from cows was 10 per cent below pre-war.

City building boom.—During a period of inflation, wages lag behind prices, and the population economizes on rent. In a period of deflation when food is relatively cheap, the demand for houses is above normal. There is no such thing as a definite housing need. The house room demanded depends on wages, and on the cost of food and clothing.

In 1923, city wages were about double the pre-war. Food at retail in the United States was only 55 per cent above pre-war, while the farmer received 23 per cent above pre-war.

This resulted in an unprecedented movement from farms to cities. This movement left empty rooms and empty houses on farms, but called for new homes in cities.

When food takes much less than the former portion of the income, a large amount is available for other purposes. Some of this goes for clothing, and both cotton and wool are likely to be very high, but a large part goes for increased housing facilities. Many more rooms per capita are required. Cheap food normally causes a building boom.

The building boom was based on:

1. Neglect of repairs to buildings and railroads during the war.
2. A shortage of houses due to failure to build during the period when food was high relative to wages.
3. High standards of housing because of prohibition.
4. Great expansion in the desire for room because food was very cheap.
5. Movement from farms to cities because the farmer got so little for food and because wages in cities were so high.

Only the first three of these were on a sound basis. For a stable condition, much of the effort expended in city construction should have been expended in improving farms, laying tile drains, repairing barns, fences, and the like. While a city building boom lasts, farm repairs are neglected.

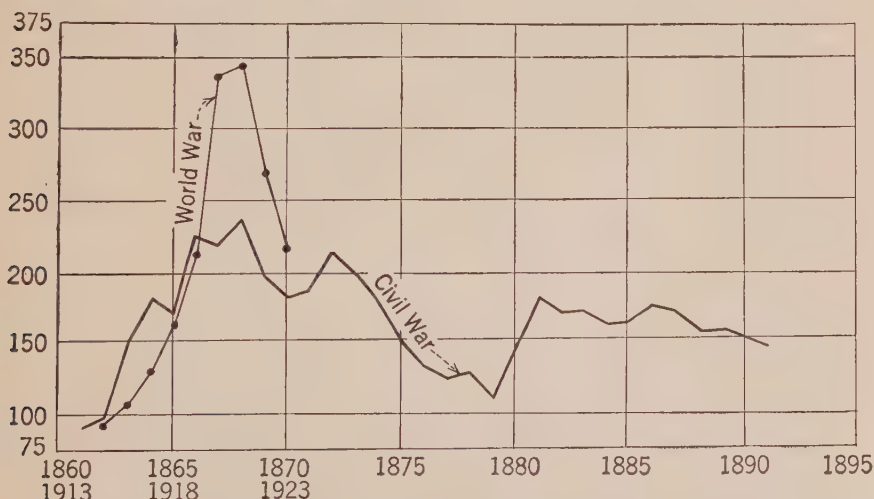


FIG. 104.—Prices of white pine and brick, Civil War period, and prices of yellow pine and brick, World War period. A building boom and high prices followed each war. From 1872 to 1879, prices declined very rapidly.

The demand for house room is very elastic. Before many years a reaction is likely to come. When it comes and there is unemployment in cities the population will suddenly find that much less room is necessary. Thrifty persons who have bought homes with a small payment down are likely to find their equities wiped out just as thrifty young farmers found their savings gone when farm values were readjusted. In any violent period of downward readjustment there is a time when prices go far too low. City houses have a very real and permanent value, but there may be periods when these values can not be converted into cash at anywhere near their true worth, just as it is now impossible to convert farm houses, barns, and tile drains into cash at their true worth. Banks are more involved in the financing of city real estate than they are in financing farms. The severest test of banks is likely to come when city real estate values are readjusted.

Price movements of the Civil War and World War periods compared.—When prices suddenly rise, a definite chain of events

Civil War Period	World War Period
1. 1860.—Business checked. Slight decline in prices due to shock at outbreak of war.	1. 1914.—Same as Civil War period No. 1.
2. April, 1862, to January, 1865.—Rapidly rising prices. Wages lagged behind. Building in cities checked. Prices to farmers rose faster than retail prices. Rapid sales of farm land and equipment at high prices in latter part of period.	2. December, 1915, to May, 1920. Same as Civil War period No. 2.
3. 1865.—Rapid fall in prices. Unemployment. Prices paid to farmers fell most. Severe agricultural panic.	3. 1921.—Same as Civil War period No. 3.
4. Some rise in prices. Full employment. Food very cheap. Building boom of houses and railroads. Agricultural depression continues.	4. Some rise in prices. Full employment. Food very cheap. Building boom—houses, railroad repairs. Agricultural depression continues, but clothing and finer foods in demand.
5. Collapse of reconstruction boom. Severe city panic.	
6. Period of generally declining prices reaching pre-war level in 1877.	

is started. When they fall, another set of changes takes place, and in each case a fairly definite order is followed. It is therefore not surprising to find that price changes during the recent periods of inflation and deflation are similar to those that occurred during the Civil War period.

False standards of living.—When wages are double pre-war and food is only 50 per cent above pre-war, false standards of living develop. Real wages are steadily rising over long periods of time, but no such large change as is indicated above can occur quickly and be on a sound basis. The low ratio of the cost of food to wages has come about by food producers reducing their standard of living, while food consumers have profited by the reduction. The ratios are, however, accepted by the cities as normal. Some newspapers even continue to complain of the high cost of living, when as a matter of fact, there was never a time when city workers could obtain so much food for an hour of labor. For many years there has not been a time when a farmer could obtain so little food or clothing for an hour of his labor. Such maladjustments result in far-reaching social and political disturbances. The farming classes become discouraged and dissatisfied during a period when food is abnormally cheap. When the readjustment comes, city consumers become equally dissatisfied and give much more audible expression to their dissatisfaction. The populist movement of the last century was the farmer's expression of his opinion of prolonged deflation. The high cost of living agitation and the socialist movement, particularly in European cities, were the expression of dissatisfaction with the readjustment.

Farm discontent.—Western farmers feel that inflation and deflation were not acts of God, but were due to the action of governmental agencies. They feel that economic laws are not allowed to work out without restriction in city industries, and believe that they should not be allowed to do so in agriculture. If one wishes to understand the point of view of western farmers, he can do no better than to read the statement of Mr. F. W. Murphy, a farmer from the Red River Valley of Minnesota.¹

"I do not think that the situation of the wheat farmer, on the whole in America, is any more acute than the situation of the general farmer. . . . My experiences have not been very pleasant

¹ Hearings before the Committee on Agriculture and Forestry, United States Senate on S1642 and S2012, 68th Congress, First Session, 1924.

during the last four or five years. I produce wheat, oats, corn, barley, rye, hogs, and cattle. I have to haul into my market to-day substantially twice as much of these various products that I have mentioned or that I grow on my farm as I did in 1913 in exchange for the things that are used on the farms in my community and, unfortunately, I do not have the extra load of each of these things to make this exchange.

"My market town is a typical agricultural town in the United States. We are 200 miles from the Minneapolis grain market and 215 miles from the South St. Paul livestock market. We have an excellent country.

"I think the problem of the American farmer is directly fundamental. In common with the other farmers of America I feel I am a victim of a bad economic situation; I feel I am the victim of an economic situation that I am not at all responsible for and, as a farmer of the country, I am chafing under it; I am resentful of being required to go on purchasing at prices ranging at 75 per cent to 150 per cent above the 1913 levels of everything that I require on my farm in a strictly domestic market, once stabilized and maintained by national legislation, and at the same time, because I produce a little more in common with the other farmers in America than is consumed in America, I am required to sell the products of my farm strictly on the basis of a world market.

"The tenants on my farm are paying taxes and are required to send their children to school and to maintain churches and build good roads, and to generally take their place in the social and business life of the country and bear, in common, the burdens borne by other men and women in other industries. Manifestly, the situation of the American farmer is unjustifiable and indefensible, and it has been so for four years. The situation was acute four years ago and to-day it is chronic. The farmers of America have produced food for four years and the agricultural structure has not broken down completely because of these two things: First, the farmer has worked longer hours and he has worked his children harder and has made a more vigorous effort than ever to make both ends meet; and, second, he has conducted his business on money he borrowed by mortgaging his lands and chattels, and to-day, on this great Nation there rests a tremendous burden of the debts of the American farmers, the result of this bad economic situation.

It seems to me as though nothing can be said in defense of this condition.

"We do not have classes in America. We have prided ourselves as a nation, that we have no classes. I hope that down through the years we will be able to say that the American farmer has not become a peasant, but he is heading straight toward peasantry and he has almost arrived.

"Now, gentlemen, manifestly we can not in this country, where we have no classes and where all of us are entitled under the law to the same consideration and, as a great Republic we have prided ourselves on that, manifestly we can not go on on two price levels, one for me on the farm below the mists of the valley, close to the ground, and the other price level up above the mists, glowing in the sunshine.

"My dollar in Wheaton to-day is worth 55 cents. I know it. I am handling that dollar and I know what I can get with all the products of the farm. It is not a case of over-production of wheat. There is a great deal of disagreement with me on that point. In the Minnesota Terminal Market to-day wheat is \$1.15. In 1913 it was 84 cents. It is higher now. In the South St. Paul market in 1913 feed cattle were \$7.25 a hundred and to-day, in the same market, they are \$7 a hundred; hogs were, in 1913, 25 cents to 40 cents a hundred higher in the South St. Paul market than they are to-day. The hogmen and the cattlemen are worse off than the wheat farmer is. It does not make any difference what the farmer is engaged in in this country, he is under a handicap. I know, because I am, as I have said, engaged in a diversified farming. The farmer is laboring under a handicap which he is not responsible for, and he can not help himself.

"Here is the point I wish to stress: The price of agricultural products has not depressed. They are not low, if you will consider the normal times and the normal conditions. The present level of agricultural prices, taking everything that is grown on our farms, is substantially what it was in 1913. If the advantage, either way, is in these Northwestern States, the advantage would be with the 1913 prices, so that our prices have not depressed. What has happened to the American farmer? Why are hundreds of thousands of our farmers bankrupt? Why are hundreds and thousands of our banks in the Northwestern States closed to-day? If you will find the reason why the farmer is bankrupt,

you will immediately answer the question why the banks are closed.

"Why are the merchants in bad financial situations in all the rural towns of the West? Find the answer to the farmer's problem and you answer all the other questions at the same time: Disparity in prices.

"Does the future hold any hope that other prices are coming down? I do not see any. For four years I have waited for it, all of us have. It has not come. There is a tendency upward. We can not go on on two levels unless we reduce, to my mind, America's most wonderful people, the men and women on the farm, reduce them to peasantry, and that this country is never going to do, understanding the question.

"I have often wondered if ever there was a great question concerning the American people that was so little understood as the status of the men on the farm. I have often wondered if any stupendous question that has affected the very life of the Nation has had so little intelligent address to its solution as has this question of the farmer. How difficult it seems to be to get over our story to the East. People, I am sure, want to understand us, but we are having difficulty in making them understand us. I think it is the finest work of men like you to-day to answer this question. For a year I have addressed myself to a consideration of it because, gentlemen, I am a victim of it. I am a very unwilling victim of it. I am not in favor of tearing down and I never was in favor of tearing down anything. This country probably can go on for a while on a high-price level. It is of little consequence if I get \$4 for a job when I have to pay \$4 for something I want to buy that otherwise I paid \$2 for had it not been for this high-price level. If we can all get up on that level, and if the farmer is the only one outside of the country's business equation, everything would be adjusted. But the farmer can not go on, can he? He is shackled. He is laboring under a handicap. He can not remove that handicap even by cooperative marketing. He can not remove that handicap by diversified farming. I am a diversified farmer and I can not get away from it. He can not remove his handicap by reducing his production and, suppose we did reduce the production of wheat to the exact amount required in America? Well, I am in competition with the world and I have no way of raising my price. I can not compete with anybody.

“ Cooperative marketing to be genuinely successful for America’s whole agriculture must have millions of dollars in capital. We have to control the world, and I am in favor of a tariff bill, in favor of the McNary bill, because, as I understand this bill, it will meet this situation better than any plan that I have understood to be here for the consideration of this Congress. . . . Sir, I can not operate on the standard of peasantry and the American farmer can not operate on the standard of peons and peasants and maintain the American standard of civilization. Either we will have a peasantry and be done with it, or the farmer will be put on a level with the other industries. Here is what has happened, what has given this high level of prices to the other industries: The Adams law, the Esch-Cummins law, the restricted immigration law, the Federal reserve law, the Coal Board, the Railroad Board, all these other organizations that aid in one way or another in the maintenance of a high domestic level of prices. If that is not the answer to it, Senator, why is it that in 1915 I could go into town and buy a ton of hard coal for \$9 and to-day with the same mines, brought over the same railroad, from the same miners, I get the same coal and pay \$20 for the same ton. Where do I get the extra \$11? The answer is I do not have it. In 1913 I bought a grain drill for \$115 and to-day I have to pay \$235 for it. Where do I get the extra \$120? I don’t get it. Manifestly, something has happened in the market since 1913. What has happened? The Government has gone into business in an extensive way and I am not asking that the Government should go out of business because, manifestly, it is easier to raise the farmer up with the same sort of machinery that raised the other fellows up than it would be to tear everybody else down.

“ I would not come seven or eight hundred miles to Washington to urge the creation by my Government of an agency that would raise the price of my wheat 3 or 4 cents a bushel, for as long as I lose money I might just as well have the agony over with soon rather than to let it string along for a period of years. I have to have 50 cents a bushel and a great deal more for the things I grow on the farm, or I am done. This bill provides a means whereby we will create that which, ever since I was a boy, I thought the American farmer should have, and that is a domestic market. It always seemed to me an injustice when I thought of trading directly up here where I had to buy directly and then sell in com-

petition with the world on a world-price basis. I thought it was a bad idea for the tail to wag the dog. I figured that if I raised 1000 bushels of wheat on my farm and sold 200 bushels in Liverpool I would have to take for the 800 bushels I sold in America the same Liverpool price that I got for my 200 bushels. Now, I know it is wrong in view of the economic situation in America to-day, and the only way to relieve the farmer is to give him a domestic market to operate just the same as other industries have, and if the farmer is not entitled to an even break in America with the laboring man, the manufacturing man, or with any other industry, then I can not understand our principles of Government. An even break is all we are asking for and an even break is that which we have not got now.

"I embrace this opportunity of letting you know how I feel about it and of saying that we can never get a price comparable with the price we have to pay unless we get it in a domestic market."

The writers have included the above statement, not because of the acceptance of the remedies that it proposes, nor because these remedies are generally accepted by farmers, but because it expresses the feelings and emotions of many farmers. If one is to deal with the agricultural problem, these feelings must be understood.

The short world crop of wheat in 1924 coupled with a good crop in the United States relieved the situation temporarily. Since the unusual combination of weather factors cannot be expected to be repeated, it is to be expected that the agricultural depression will again present itself for solution.

CHAPTER XXVII

ADJUSTING FARMING TO DEFLATION

Desirability of a stable price level.—Any one who has read the preceding pages of this book will realize the serious consequences that follow inflation or deflation. The injustice between debtors and creditors is one of the major problems, but as society becomes more complex, inflation and deflation cause all manner of difficulties and have the most far-reaching consequences. Few public problems are of more importance than the money question. It is certainly a comment on the inventive genius of man that while measures of length have been standardized for several centuries, the thermometer invented over 400 years ago, and we can measure the strength of the lightning and the length of a bacterium, yet we have not put into use a stable measure of value.

The farmer who borrows money of the Land Bank to be repaid in thirty-five years, or the taxpayer who is back of government bonds is gambling on the success of the chemist and the prospector in getting gold. If they are highly successful he wins, if unsuccessful he loses. Only if their success happens to be just right to keep pace with the currency needs do both the borrower and the lender receive justice.

The farmer must plan for the probable rather than for the desirable outlook.—Serious as is financial deflation, particularly to agriculture, it is the belief of the writers that the general tendency of prices will be downward for the next ten to fifteen years and that prices are likely to approach the pre-war level. This does not mean that everything will go down, or that there will ever be a time when each product is at pre-war prices, or that the average for all commodities will be downward at all times. At the time this is being written (July, 1924) there is every indication that a revival of business activity and rising prices are to be expected for the year 1925. Some persons will hail this as the end of deflation. But the farmer needs to know what the price level

is likely to be in 1935, because many of the expenses which he incurs in 1925 will not be paid before 1935. If the general tendency of prices is downward the experiences after the War of 1812, after the Civil War, and the experiences of other countries during deflation make it possible to forecast the general tendencies fairly accurately.

If a farmer expects deflation and if it should not occur his farming practices will be too conservative. If he does not expect it and it does occur he is likely to lose his farm. It happens therefore that the forecast of the writers is safer to follow than is the forecast of the more optimistic persons who believe that the agricultural depression is over and that prices will remain at 50 per cent or more above the pre-war level. It is also safer for one's peace of mind to accept the more conservative forecast, for to have things come out better than was expected is less distressing than to have them turn out worse.

The man who farms in a period of rising prices may succeed in spite of his practices. Neither he nor his neighbors nor his banker distinguish clearly between the causes, and all agree that he is a shrewd business man. The man who farms in a period of falling prices may fail through no fault of his own. Again the causes are not clearly analyzed and he is likely to be accused of lack of business acumen.

But a man must farm in his generation. He can not wait for a more lucky time. He must therefore adjust his procedure to the circumstances of his day. If he does this, he may get along very well in spite of circumstances. In fact it is possible to profit by deflation by taking advantage of distressed sales. For the man who is out of debt and for the young man who has not started farming, the outlook is good if he will follow the right procedure.

Farming is a mode of life as well as a business. A farm continues to be a good place on which to live and rear a family, even though deflation may occur. If one can adjust both his mind and his practices to the situation, he can go on farming and enjoy life in spite of the money question.

Inflation calls for production.—From 1896 to 1914, prices rose at the rate of over 2 per cent per year based on the middle year as 100. Prices rose much faster from 1914 to the summer of 1920. The period of rising prices, therefore, lasted for a quarter of a century and ended with violent inflation. The entire philosophy

of life is changed in such a period. People become optimistic. It pays to buy things, even though it requires that one go heavily in debt. The emphasis is placed on production, and even if the operator is somewhat inefficient, he may still make a profit. The philosophy of such a period may be summarized in the words, "Be optimistic and produce."

Deflation calls for economy.—In a period of falling prices, the whole emphasis is shifted from production to economy. The pessimist has his day. Instead of having things turn out better than was expected, they turn out worse.

The man who clears land or lays tile drains, thinking the expense might be paid in a period of fifty years, may find it very difficult to pay interest on the principal, to say nothing of reducing the principal. One who raises a heifer calf may find his cow a few years later worth less than the cash cost of raising the calf. It would have been better for him to have let a neighbor raise the calf and to have bought the cow.

This shift in the point of view is well illustrated by the misunderstanding between father and son in the past quarter of a century. Farmers who got their experience from 1865 to 1896, when prices were falling, learned economy. They learned that things that figured out all right did not come out right. Their sons who started farming when prices were rising, quickly learned the production philosophy. Many pathetic family disagreements resulted. The young man could not understand the farmer's slowness and the father could not understand the son's optimism and apparent rashness.

Since most of the persons who have learned how to operate a farm in a period of deflation are too old to be actively farming, the methods of operation in such a period are of interest. Some of the points to consider are as follows:

1. How to judge prices.—Following a war there is serious danger that prices will return to the pre-war basis, and it follows that great care should be exercised in buying anything that is much above its pre-war price, unless it will pay for itself quickly.

2. Wages lag behind prices.—When prices are rising, wages rise less rapidly. One who employs labor therefore makes a double profit. He is able to hire labor at abnormally low wages, when wages are expressed in terms of farm products, and usually sells his product at prices higher than he had anticipated.

When prices are falling, wages also lag. One who employs labor then pays an abnormally high price and is likely to receive less than he expected.

It therefore follows that in a period of deflation great care should be exercised in the employment of labor. The importance of saving labor is greater than usual.

3. Labor-saving devices.—Since it is so important to save labor, a period of deflation calls for study of the desirability of greater use of trucks, tractors, automobiles, milking machines, better barn arrangement, better field arrangement, and the like.

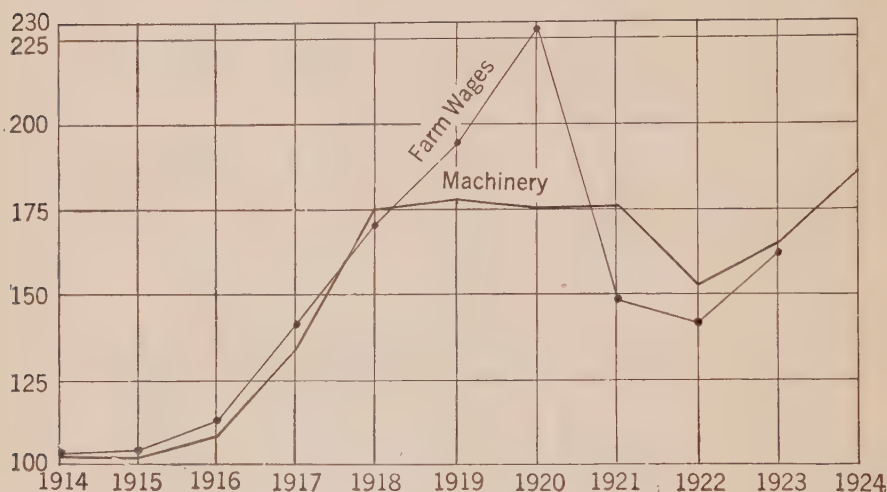


FIG. 105.—Wages of farm labor and prices of machinery. Machinery saves high-priced labor, but is itself high in price.

Whenever these call for cash expenditure, one must remember the caution about buying anything that is much above pre-war prices unless it will pay for itself quickly. For example, if a farmer plans for a barn improvement that under ordinary circumstances would be expected to pay for itself in twenty-five years, he should figure that it should be worth at least 4 per cent per year in addition to interest. If the cost is \$100, and if interest rates are 6 per cent, the improvement should be worth \$10 per year. If the cost is twice as great as before the war, and if pre-war prices are to be expected, half of the cost should be paid for quickly. Five dollars per year would pay interest and depreciation on the pre-war cost

basis, but the other \$50 must pay for itself quickly if it is to be a profitable investment.

4. Labor-saving plans.—Much can be done in saving labor by the expenditure of thought rather than cash. One may depend more on the use of the telephone and mail, and less on travel. Banking may be done by mail. Bills may be paid by checks that are mailed.

Machinery may be repaired in winter and put in shape for immediate use when it is likely to be needed.

Unless one has a very unusual memory, he can save much time by carrying a pencil and memorandum and jotting down the things to be done. When a rainy day comes, he can turn to this and see the more important things to be done. When he goes to town he can do the things that will be necessary for some days to come.

It is often possible to make some arrangements of barns, fences and water that will save labor without much outlay of time. It is also often possible to drive more horses per man.

One of the most important ways to save time is timeliness in labor. If the work has been thought out in advance so that one is ready to make use of every possible moment, when the right time comes he may be able to do his work in many less hours. One of the most important things for the young farmer to learn is to so plan his work that he is always doing the right thing at the right time.

Orderliness in work, and in the putting up of tools, machinery and the like will save much time. Disorderly persons often say that they do not have time to keep things in order. As a matter of fact, only those persons who have time to spare can afford to be disorderly.

5. Food for home use.—Since freight rates, wages and handling charges all remain high, the farmer sells on a low market and buys on a high market. For three years food at retail was 50 per cent above pre-war and prices that farmers received were only 22 per cent above pre-war. It is therefore profitable to raise food for home use, rather than exchange farm food produce at wholesale for city food at retail. At the ratios given above, the farmer had to deliver 23 per cent more food to the city than formerly in order to get back his normal amount of groceries from the city.

Formerly much time was lost in farm gardens because so much

of the work was done by hand. Gardens should be so arranged that horses can do most of the work. Women's time is now too valuable to be wasted in doing things that a horse can do.

6. Retailing farm products.—Most farmers must always sell their products at wholesale, but conditions on some farms are such as to make retailing profitable. In a period of falling prices the advantages of retailing are greater than usual because the spread between farm and retail prices is greater than usual.

7. Advantages of large farms.—In many of the northern states, most of the farms have been growing larger for many years. This

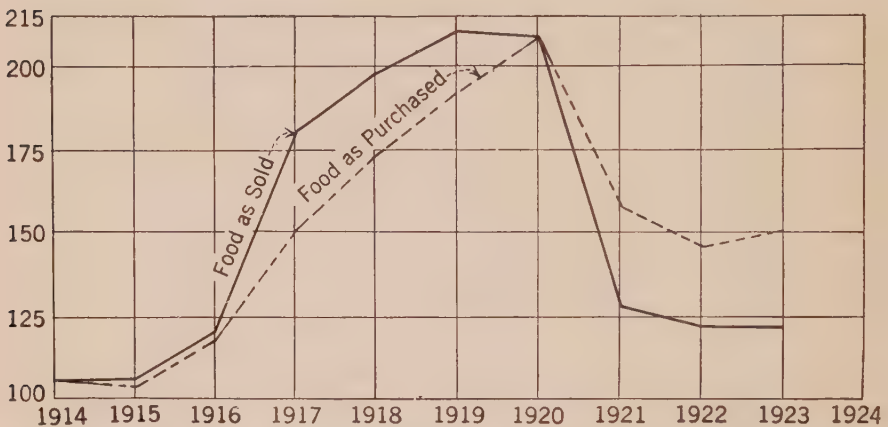


FIG. 106.—Prices of food as sold by farmers and prices of food as purchased at retail. Compared with pre-war, food at retail is higher than food as sold by farmers; hence, it pays better than formerly to raise food for home use.

is because of the great efficiency with which farms that provide work for two or three persons can be operated.

Since wages remain high, a period of deflation puts the farmer who has to employ labor at a disadvantage compared with the strictly family farm. Whatever the labor force, the farm should be large enough to employ the force to its full capacity. It takes excellent management and very favorable circumstances to justify much hired labor at the present level of wages.

8. Large vs. small yields.—When prices rise, yields per acre rise; when prices fall, yields per acre fall. This is because the last bushel is usually a more expensive bushel than the previous one. This is not the case for every field, but is true in general. On the best lands, farming proceeds with less change, but in regions where

there is considerable inferior land, large yields should be obtained by ceasing to operate poor land rather than by intensive methods. The poor land may be used for pasture, or for hay if it will produce hay without especial care. In some cases it may pay to leave it idle. The next stage beyond this is to leave the farm and work elsewhere, either temporarily or permanently.

9. Refunding debts.—In a period of deflation, payment of interest and principal is difficult. Those debts that can not be paid, should, if possible, be converted into long-time investments such as land-bank mortgages.

10. Violent price fluctuations.—In a period of deflation, price fluctuations are more violent than normal. Because of low profits and erratic prices, farmers are more than usually inclined to rush from producing the low-priced to producing the high-priced things. Bankers, business men, and the government also add to the danger of this unwise procedure by advising farmers to diversify. By diversity they usually mean to increase the production of something that at the moment is high in price.

Profits from buying the low-priced things before the upswing are more than usual. Every year some farm products are high in price. It is the average of agriculture that is likely to be low. The farmer who buys the low-priced things just before an upswing begins, or near enough to that time so that he is able to hold for the advance, may do very well.

The most striking influence in a period of depression is the redistribution of wealth. Property is taken from those who have earned it and given to those who have not. This is true between city and country, between debtor and creditor, between taxpayer and bondholder. It is also true as between individual farmers in the same community. Some are able to buy the farms, stock and tools of their neighbors at very low prices, and if they are able to hold until recovery occurs, may do very well. If they buy too long before the rise in prices, they may in turn lose their property. The young man who is ready to start farming when the depression is most severe has a good opportunity to buy his farm and equipment at very low prices. Someone will own all the farms when the tide turns, and the property will then be valuable.

11. Importance of studying the general price level.—Judgment of prices is usually based on past experience. If the whole level of prices is changing, past experience becomes a poor guide. In

such a time it becomes necessary to watch the general price level and to watch business conditions. If prices in general are 50 per cent above pre-war, a product that is 30 per cent above pre-war is cheap. The presumption is that its price will rise sooner or later. Unless some other facts are known that change the conclusion, it is a good time to buy and a bad time to sell that product.

12. Over- and under-production.—The cycles of over- and under-production of individual farm products are likely to be more violent than usual. It is therefore more important than usual that these be considered.

Prices of horses in 1924 were at about the bottom of the cycle and had a lower purchasing power than at any other time for two generations. Since the horse cycle is about twenty to twenty-five years in length and very violent, it is practically certain that in about five to six years horses will be so scarce as to bring fair prices, and that they will be very scarce and high in ten to fifteen years. It is therefore advisable to buy young horses that will live to be valuable and it is advisable for farmers in regions adapted to horse breeding to shift to young mares of good quality.

The hog cycle reached bottom in 1924. Probably hogs will bring a fair price in the summer of 1925 and will be scarce by the winter of 1926. When hogs are cheap it is a good time to shift to the better grade of young brood sows and carry a rather heavy stock. When they are high in price it is well to sell off the stock closely.

The beef-cattle cycle was at the bottom in 1924. Since this cycle is about fifteen years long, it is probable that beef cattle will bring fair prices in about five years and that they will be high in ten years. Before they rise too much it is desirable to shift to young heifers of good quality. When high in price it is well not to carry too many.

13. Buying a farm.—The young man who has not started in farming may find it advantageous to remain a hired man longer than he would have done if prices were rising. Some farms must be sold and with few buyers some very unusual opportunities occur. The young man can wait for one of these opportunities. When prices were rising, debts were easier to pay and a delay in purchase often meant higher prices.

Since labor and materials are high as compared with pre-war prices and are probably high as compared with future prices, the

advantage of buying a farm that is in good condition with adequate buildings in good repair is greater than formerly. To shingle buildings and drain land will generally cost much more than to buy these things already done. There are of course exceptions, but the presumption is in favor of the place that does not call for much labor or materials in making improvements.

14. Best procedure an individual matter.—The wise procedure for farmers of different ages, for those with different amounts of family labor, and particularly for those with different amounts of debts will differ decidedly. The man who is out of debt may continue to improve his farm and operate much as usual, expecting that the day will come when he will be rewarded. The man who is heavily in debt must give primary consideration to the date when the reward for each expenditure will come, rather than the certainty of the reward. Few rules can be made that are desirable for universal application, except to be more than usually alert for both opportunities and dangers.

15. A good time to prepare for farming.—This is a good time for a young man to prepare for farming. One who studies agriculture now probably will be ready to start farming when he can buy a good farm business at a low price. From the long-time point of view farming promises as desirable a mode of life as ever. The present panic is causing the loss of the life-time savings of thousands of thrifty persons who happened to start farming too recently to be out of debt, but the man who begins when prices are at the bottom may actually profit by the disaster to agriculture.

Wages are good so that one can earn money rapidly during vacations. Probably it will be a long time before there is a better opportunity to save money out of wages, provided the worker is willing to go without some of the things that are not necessary for his health or education. Many persons always spend all they earn as soon as they get it, if they have not spent it before. They prefer temporary pleasure to future happiness, or may be carried along by their associates rather than control their own lives. The young man who plans to be a farmer must have more self-control. He must pass by the shop windows, see things that he desires and keep his money in his pocket, because he wishes to save it for future needs. One who plans to control his own destiny rather than always depend on some one else for his income should keep an account of his receipts and expenditures

and occasionally go over the expenses and see which of them he would now prefer to exchange for the cash that they cost. The safest investment of time and money for a young man is an education. We hear men regretting all kinds of expenditures and mistakes of the past. Have you ever heard a man regret that he studied so long?

CHAPTER XXVIII

REMEDIES

Discontinuance of deflation.—Since the primary basic reasons for the agricultural depression are financial inflation followed by financial deflation, the remedy that would be most effective is the maintenance of a general price level that is adjusted to freight rates, taxes, and pay of public employees, and to the price level when debts were incurred. If such a price level is not maintained, the effective remedies will be much more difficult and quite different.

The agricultural depression is primarily due to two factors; first, the disparity between farm prices and prices of things that farmers buy; second, the disparity between farm prices and payments of taxes, interest, and debts.

The first of these might be corrected either by raising the prices of things farmers sell, or by lowering prices of things they buy. The second can only be corrected by raising the prices received by farmers, because public and private debts remain fixed in dollars, regardless of prices.

The only way to bring adjustment between taxes and interest payments is through a discontinuance of deflation, so that the general price level will be as high as the average level of prices when public and private debts were incurred. Farm prices are out of adjustment with prices in cities and out of adjustment with wages, taxes, and freight rates.

Adjustment of farm, wholesale, and retail prices.—Prices might come into adjustment by:

1. An increase in the American demand for farm products;
2. An increase in the foreign demand for farm products;
3. A reduction of wages and freight rates;
4. A reduction of the supply of farm products;
5. An increase in the general price level.

Increasing American demand.—If the American demand for farm products could be increased the present supply might be absorbed at higher prices. However, American consumption is

already extremely high. Food at retail is 50 per cent above pre-war prices, and wages are double pre-war. There is, therefore, almost no chance to increase the American demand. Since periods of unemployment are likely to occur, it is more probable that American demand will decline. If given time enough, the growth of population will increase the demand sufficiently to bring about adjustment. However, this is a slow process.

Increasing foreign demand.—If the foreign demand could be increased, it might bring farm prices into adjustment with other prices. There is, however, less possibility of increasing the foreign demand than of increasing the American demand. Agriculture in foreign countries has recovered from the war much more fully than has industry. In many countries, there has been a movement to farms. Every European country is bending its efforts to become more nearly self-sufficient, so that the proceeds from exports can be used for the purchase of raw materials and the payment of debts. Even if we had no tariff, it is probable that manufactured products would be high compared with food products, because world industry is less adapted than is world agriculture to meet world demand. Even if there were no tariff, American industry would be in a favored position.

Reduction of wages.—As indicated in Chapter IV, wages always lag behind prices, both when going up and when coming down. This was true in the Civil War period, and is true for every experience with inflation or deflation, for which the writers have found data. To greatly reduce wages is a very slow and difficult procedure. Reduction can come only as a result of periods of unemployment, and these must be very drastic or very frequent if much reduction is to occur. A period of unemployment makes matters worse, since it reduces demand without materially reducing handling charges.

Reduced farm production.—Reduced production is taking place because of the abandonment of some lands and because of the use of less careful methods on good lands. This is a slow process, but will in time bring results. Merely raising a little more of this or a little less of that product does not bring a solution.

The only real solution by this means is through lower yields per acre or idle fields or farms. Since the farmer who remains on his farm must bend every effort to increase his sales, the reduced production must depend on the abandonment of farms or on such

large movements away from farms that it becomes physically impossible for the remaining farmers to work all the land.

A quick adjustment can be brought about by diseases, insects, or unfavorable weather. Foreign demand for cotton has been low, but the price of cotton was quickly brought into adjustment with other prices by its demand as food for boll weevils. The unfavorable weather, in 1924, so reduced the world wheat crop as to raise prices even though the crop in the United States was good. The unfavorable weather in the corn belt raised the price of that crop. The high prices brought about by such accidents help for a time, but do not solve the agricultural depression. A drought such as occasionally comes might so reduce the supply of food products as to bring price adjustment for a time. Diminished production is not a desirable way to meet the situation, because it is so slow and because the momentum that will finally develop will doubtless make production too low for a number of years after adjustment has been reached.

Increase in the general price level.—As has been shown in Chapter IX, *whenever retail prices are higher than the level of wages and handling charges, prices paid to farmers rise by a greater percentage than do retail prices. Whenever retail prices are low in relation to wages and handling charges, prices paid to farmers fall by a greater percentage than do retail prices.*

A severe agricultural depression is an inevitable result of rapid deflation. Since it requires many years for wages and public-service charges to decline, the disparity between farm prices and prices of the same commodities at retail must continue so long as deflation continues, unless a very striking shortage of farm products develops.

An increase in retail prices makes little change in handling charges, but a large change in farm prices. Of course, any change in one price always has some influence on other things, but judging by past relationships it seems probable that, under conditions existing in 1924, farm prices would come into close adjustment with retail prices, if retail prices of food were to rise to 75 to 80 per cent above pre-war. With the decrease in production per capita that has already occurred, a slightly lower figure might suffice. The relationships here described, together with the many years required to adjust taxes and debts to a new price basis, explain the reason why farmers are opposed to drastic deflation.

By means of purchases of securities and by means of the discount rate the Federal Reserve Banks have a large influence on the amount of inflation and deflation, and on the rapidity with which either one progresses. They can have a strong influence in stabilizing prices and in determining the price level at which stabilization shall take place.

Decreasing the supply by dumping.—Several proposals have been advocated which suggest getting rid of the exportable surplus so that the American price might be approximately equal to the world price, plus the tariff. Prices of farm products that are exported would then be protected by the tariff in the same way that manufactured products are protected. The McNary-Haugen Bill proposed to do this by having the Government buy the surplus in the home market and sell it in the foreign market. The farmers were to receive their pay partly in cash and partly in script. The value of the script would depend on the losses incurred by selling the exported product at less than the purchase price. This bill was heartily supported in some of the Western states. It failed to pass because it was opposed in eastern industrial centers, which distrusted the general idea and feared that it would result in higher costs of living.

The farmers have noted that large corporations sell their surplus products abroad at prices much below the American prices, which are protected by the tariff. Since agriculture is made up of small units, it can not make use of this practice. The farmers' point of view is illustrated by the testimony of C. C. Davis, Commissioner of Agriculture of Montana, who spoke as follows before the Senate Committee:

"As I say, the manufacturer can not always do that. There is an instance of the United States Steel Corporation. Let us take that as an illustration: Last year, in November, a study of the export price of steel and the domestic price of steel established this fact: That the steel manufacturers had sold abroad at an export price that was fully $33\frac{1}{3}$ per cent lower than the sustained domestic price approximately \$400,000,000 worth of steel products in a year."

Another proposal is that the Government pay a bounty on exported wheat substantially equivalent to the tariff, and that the losses be taken from profits made by the War Finance Corporation. It is not probable that any of these measures will be passed.

Tariff.—This country is a large importer of wool. The tariff on wool has made the sheep industry prosperous. It raised the price of wool and, indirectly, raised the price of sheep. Farmers are keeping more of their sheep and lambs, and the supply of meat is temporarily decreased. This helped to raise the price of mutton and wool.

The tariff on flax has raised the price of flax. The acreage of flax in 1924 was 64 per cent more than that of the preceding year. A still further increase can take place before there will be a surplus.

The tariff increased the price of the good grades of spring wheat. Considerable quantities of this are imported, since the American production is not sufficient to meet the demand. It is probable that the tariff has had some influence on the better grades of hard winter wheat, but the influence here is less marked. The tariff has had little if any influence on the grades that are exported.

Restriction of immigration.—Wages always fall less rapidly than prices, but the restriction of immigration will undoubtedly help to keep them high. Some persons believe that the farm depression would be over if immigration were unrestricted. They believe that this would break prices of labor in this country and make it possible for farmers to hire labor so cheaply that the farmers could make a profit even at the low prices of farm products. This point of view assumes that the farmer's market would remain as good as at present. If wages were to decline materially, the demand for farm products would be reduced. At the same time, if farmers had more labor they would increase production. It is certainly not consistent to argue that there is already too great a production, and that the remedy is to get more labor so as to produce more. Another fallacy in this reasoning is the assumption that the farmer's profits are dependent on hired labor. Over three-fourths of the labor is done by the farmer and members of his family. If wages are low, the returns from this labor will be low and will more than offset any profits on the small quantity of labor hired. The primary income of the majority of farmers is pay for labor rather than from profits or income on the investment. It is the exceptional farmer who employs so much labor that he is benefited by low wages.

Credit.—It is often said that credit would be of no use to farmers, since they are already in debt and suffering from too much credit. It is true that debts are the most important problem in the situation,

but extension of credit at the present time, when debts are already contracted, does help the situation. In a period of agricultural distress, there is no danger of easy credit leading farmers to undertake to improve their farms or otherwise expand their business on borrowed capital. Credit in a period of depression is used to refund previous debts.

The present debts of farmers were not excessive at the price level at which they were incurred. They have become excessive because of the fall in prices. Any debt is an excessive debt if it is contracted to buy things when prices are high and if prices decline before the things are paid for.

Thousands of farmers are using long-time credit for the purpose of preventing total loss of their lifetime savings. In some cases it may be better to turn the property over to the creditors and start anew, but bankruptcies have never been in high repute in farming communities. Farm business standards expect the upstanding man to go on for his entire life, if necessary, struggling to meet his obligations in full.

Very fortunately, the loans through the Land Bank are available to those who own farms and who are not too heavily involved. These are available on first mortgages for about 50 per cent of the pre-war value of the farm. The total payment of interest and principal carried over a period of thirty-five years, is often about the same as the payment of interest alone under former systems, when commission, renewal charges, and the like are included as interest. These mortgages often enable men to spread the effects of deflation over a long series of years.

The intermediate credit banks were organized so recently that they have not yet reached their full development, but they have already proved of great value, particularly to cooperative associations. As time goes on, they will be of increasing value to the agricultural community. Too much of the farm credit is financed in expensive ways. Too large a proportion of the farmers' credit needs are financed by agencies that are not well adapted to furnish credit. In two counties in New York State, the proportions of the total credit furnished by banks were 8 and 27 per cent, respectively.¹ Store credit usually costs about twice as much as credit obtained through banks.

¹ Myers, W. I. and Spencer, L., *How Farmers are Financing their Farm Operations*, Farm Economics, No. 11, p. 102, Feb., 1924.

The intermediate credit banks do not make loans directly to farmers, but such loans are being made in some states through local credit associations. A greater use of the ordinary commercial banks of the intermediate credit banks, and of the land banks will help agriculture. The farmer who buys supplies, machinery, or fertilizer on time is being financed in a very expensive way.

A greater use of banks does not mean a greater use of credit. It means going to the right store to buy the credit,—the store where credit is cheapest.

Cooperation.—In every period of inflation and deflation, large numbers of cooperative associations are formed. When inflation takes place products rise in price, and any agency that prolongs the farmer's ownership is likely to be profitable. The idea of holding products becomes prevalent.

When deflation occurs, the distressed state of agriculture makes farmers grasp at any thing that proposes a solution. The increased discrepancy between the prices farmers receive and the prices for which the farmer sees these products sold at wholesale or retail, increases the unrest and leads farmers to attempt to find some solution to correct the situation. Since the general tendency of prices in a period of deflation is downward, it follows that agencies that prolong the farmer's ownership will often have disastrous experiences because of price declines.

Large numbers of cooperative associations were organized just before the agricultural depression began and during its progress. Some of these have been successful, others have failed, and still others may be expected to fail. It is not to be expected that every business corporation will be a financial success. If they were, we would all be rich. The percentage of business corporations that succeed is small. All new enterprises meet with special difficulties during falling prices, and numerous failures must be expected.

When farmers realize how many farmers bought farms in recent years and failed, they should not be surprised if some of the cooperative associations also fail.

In order to finance a cooperative association properly, usually a considerable amount of money is required, and many of the failures are due to inadequate capital. Farmers and agricultural communities are usually short of money for the farm business, and are not in a position to make outside investments. In a period of depression, the shortage of money is even more serious. It is

therefore difficult to finance cooperative associations at such times without placing a considerable burden on the membership. Even though the association may be successful, it is usually not possible to give the farmers greater financial returns immediately.

Cooperative associations also have another difficulty to meet, in that they are usually vigorously opposed by dealers and corporations. This opposition is not like the competition which a new firm usually encounters, but is a special opposition to the whole principle of cooperation. Much time and money are spent in order to prevent cooperatives from being a success. This opposition is not confined to those who are in the same business, but is often shared by other industries not directly affected, but which fear that, if successful, cooperatives may spread to their fields.

Cooperative associations that discontinued were not necessarily failures. They may have served a useful purpose while they lasted, which may have been worth as much as the losses incurred.

Out of every wave of cooperative effort a number of permanently successful cooperatives emerge. The permanent good that comes from these successes suffices to pay for the failures. Many of the present associations will undoubtedly last and be of great service.

Successful cooperatives can do much in standardizing products, stimulating consumption, and reducing costs of operation. But to expect cooperation to cure the agricultural depression is to expect the impossible.

Diversification.—Diversification has been vigorously advocated as a remedy for the agricultural situation. Many city business men believe this to be the remedy. A bill was introduced in Congress (Norbeck-Burkness Bill), appropriating sixty million dollars, to be loaned to farmers in the spring-wheat belt of the Northwest, with the intention of getting these farmers to buy dairy cows, hogs, and hens.

This bill received the approval of the metropolitan press and was understood to have the approval of the administration, but failed to pass in the Senate because farmers feared that it would stand in the way of legislation that would improve the price situation.

Practically all the discussion of diversification has centered around shifting production from some low-priced articles to some high-priced articles. The farmers need no outside help to persuade

them to shift from things that are very low to things that are higher in price. The writers have observed no propaganda urging entry into the beef-cattle or the horse business. Both of these classes of livestock were very low in price. In 1922-1923, butter and eggs were very high in price, and these received the diversity advertising.

So far as the writers have observed, none of the advocates of diversity as a solution have indicated what regions are to reduce the production of the articles that are to be added in the region that is the subject of propaganda. It has not been shown that the country as a whole was producing too few eggs or too little butter. Unless a material increase in these products is wanted the increase in one section must be compensated by a decrease in production in some other region. Production of supplies for home use is another problem and is discussed in Chapter XXVII.

It would be very desirable if farmers could at all times have for sale the particular product that is high in price at the moment. To start to produce such a thing when it is high is a very different proposition. The farmer is likely to be just ready to have it for sale by the time it is cheap. *It is future prices, not present prices, that determine the profits from future production.*

Very disastrous results often follow shifts from a major to a minor enterprise. For example, the price of potatoes in North Dakota was better than for most other products in 1920 and 1921. As a result the acreage of potatoes in 1922 was more than twice the acreage in 1920. The acreage for the United States was decidedly increased, and consequently the price in North Dakota on December 1 was but 31 cents per bushel. Many farmers sold for 15 cents per bushel. Those who attempted to diversify by raising more potatoes increased their losses. This increase in acreage was sufficient to make potatoes unprofitable, but did not decrease the acreage of wheat materially.

To undertake a new type of farming usually calls for capital and skill. Capital for new investments is very scarce in an agricultural depression, and it is unwise to attempt to compete with the production of more favorable regions.

One of the characteristics of an agricultural depression is the tendency of farmers to rush to any product that promises a way out. Since there is a constant tendency for the high-priced products to be over-produced and for the low-priced products to be under-

produced, it is usually wiser to continue the type of agriculture adapted to the region, or shift to the things that are cheap. This requires less capital and is more likely to be profitable. The man who rushes to the high-priced product, too frequently, finds that he is just established in production at the time when all others who rushed in are also established, so that the increased quantity results in a low price.

Some of the regions that are highly diversified were most seriously affected by the panic. Few states in the Union are more diversified than Iowa, yet it has suffered severely from the depression. Montana is a great producer of beef, wheat, and horses. It happened that all of these were cheap. In 1923, beef cattle were as cheap as wheat, both being at the pre-war level. Horses were practically unsalable. It would be very desirable if in this state the best beef heifers and brood mares could be kept. The time will come when these will be needed.

Increased efficiency.—For many years there has been a steady increase in the amount of work done by one farmer. The grain production of persons engaged in agriculture increased from about 7 tons in 1870 to over 12 tons in 1920.¹

From 1910 to 1920 the increase in crop production per worker was nearly one-fifth.² No data are available showing the increase in efficiency since 1920. It is certain, however, that the production per worker has been materially increased.

Time as a remedy.—If the general price level will remain stable, agriculture will become adjusted to it in time, regardless of what that price level is. The steady growth of population together with shifts in production will in time bring agriculture in adjustment with other things. New buyers will gradually take over the farms and farm property at favorable prices. For these reasons an agricultural depression is not likely to last more than from fifteen to twenty years, even though nothing is consciously done to help the situation. This is the remedy that is usually depended on. It brings about an opposite set of maladjustments which in turn require many years for correction. When an agricultural depression ends a period of agricultural prosperity follows.

¹ Young, E. C., *The Movement of Farm Population*, Cornell Agricultural Experiment Station, Bull. 426, p. 7, Mar., 1924.

² Holmes, G. K., *Agricultural Situation*, Vol. 5, No. 6, p. 12, June 1, 1924.

The farm depression is a price problem.—The solution of the farm depression calls for:

1. Adjustment between the prices of the things the farmer sells and the prices of the things he buys;
2. Adjustment between the prices of the things the farmer sells and taxes;
3. Adjustment between the prices of the things the farmer sells and public debts;
4. Adjustment between the prices of the things the farmer sells and private debts.

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